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THE IMPACT OF MINE CLOSURE IN BRITISH COLUMBIA

Prepared for
The Province of British Columbia
Mine Closure Task Force Chaired by
Ministry of Energy, Mines and Petroleum Resources

Prepared by
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CHAPTER ONE

INTRODUCTION

Mines and associated mills, like any other capital asset, have a limited economic life -- if for no other reason than the ore bodies on which they depend must eventually be depleted. Investors anticipate this at the outset when a decision to develop a mine is made. While the ultimate life span of the mine may be longer or shorter than originally expected, investors nevertheless enter into production knowing that at some time they will have to make a decision to close a mine. If they are prepared to proceed on that basis, it is implicit that they expect to recover from the operation of the mine a return on their capital investment, as well as the return of that investment.

Mines and mills don't operate in a vacuum. They create a demand for supplies and services, the provision of which, in turn, requires investment decisions by third parties. For some of those third parties the life cycle expectations of a given mine may not be important. That mine may be a "marginal" customer, accounting for only a small part of their business. Their business investment decisions will be based on a host of factors and expectations independent of the given mine's performance, and when the ultimate decision to close the mine is taken it is of little consequence to them.

For others the situation is markedly different. A given mine may be the key to their economic activity, and their own decisions are based on expectations about the mine's life cycle. The decision to close that mine is of serious consequence to such parties. This is particularly so when the time at which the closure occurs is markedly different from what had been anticipated when their own investment decisions were being made.

Those who may find themselves in these circumstances may include:

- **direct employees** -- In conjunction with their decision to work at a particular mine or mill (supply labour), employees may make decisions to invest in housing. If that housing is fixed, not mobile, its value may be affected by mine closure.

- **indirect employees** -- Service sector entrepreneurs and employees are frequently in the same position as direct employees. They will have made decisions regarding business premises and housing, based on some expectations about the operating life of the mine. Again to the extent that they have invested in fixed assets, the value of their holdings may be affected by mine closure.
- **local and regional governments** -- Local or regional governments may also have invested in fixed plant, equipment, and infrastructure to serve a given population with some expectations about the duration of the demand for the services provided. Mine closure, by affecting population, may affect the demand for services and the cash flow available to pay for them.

The initial consequence of a decision to close a mine or mill is simply that the demand for services (including labour) and supplies falls. In turn, this means that the demand for the fixed assets used in the production of those services and supplies will fall. If there is no other activity to compensate for that decline in demand, the fixed assets will fall in value.

The difficult consequence of a mine or mill closure decision thus may be that *fixed assets, owned independently of the mine or mill operators, lose value as the demand for the services they provide falls. A further consequence may be that the mobility of labour may be impaired, to the extent that people are unwilling or unable to sever ties with fixed assets.*

The degree of loss of value and impairment of mobility that follow from a closure decision will depend on the extent of dependency on the particular mine or mill.

At one extreme, if a mine or mill is part of a diversified, growing economy, the cessation of activity simply "frees up" resources that would have otherwise been used in the mining activity and makes them available for other uses. Direct mine/mill labour may find alternate employment (or move to where other opportunities in mine/mill work are available); service sector workers and entrepreneurs meet the demands of other customers in a growing economy, and the population base is maintained so that the demand for services provided by local and regional governments is not diminished. Under these circumstances the consequences of a mine/mill closure do not give rise to concern.

At the other extreme is the isolated single industry town. Mine or mill closure *eliminates* the local demand for services and supplies. Unless a replacement activity can be found (and in the absence of external demand), the value of fixed assets falls to zero -- in effect the "ghost town" scenario. Labour may be forced into mobility, but if the closure is unanticipated, or comes sooner than anticipated, at a significant cost in terms of lost asset value.

Problems of varying severity between the two extremes outlined above may arise from any given mine closure. The essence of those problems is that the outcome of a decision regarding mine life is different from what had been expected by others in making a wide range of decisions. An unanticipated (or sooner than anticipated) closure, with reduction in demand for goods and services, may lead to a loss in asset value. Where equity is involved, its value falls or may be lost entirely. Where debt is involved, either public or private, the obligation to repay remains, but there is no cash flow to meet the obligations.

With a long history of mining, British Columbia has been witness to this process on numerous occasions. The historic ghost towns are evidence of the early extremes, where closure of a mine meant abandonment of the towns that had sprung to life around them. The past decade has seen several significant closures and other near closures. Some of the larger closures include the Craigmont mine at Merritt, the Amax mine at Kitsault, the Granduc/Canada Wide mine at Stewart, Bethlehem at Ashcroft, Boss Mountain at Williams Lake, and the Highmont mine at Logan Lake.

The purpose of this report, for the province's *Mine Closure Task Force*, is to look ahead and identify possible mine closures in the next five to ten years. The circumstances surrounding each possible closure are reviewed, and an initial assessment is made of the extent to which a closure may give rise to adjustment problems. Existing government programs that can be called upon to provide adjustment assistance are reviewed. Where a gap is identified between the nature of the adjustment problems and the available assistance programs, recommendations are made for changes to those programs or for new initiatives. In this regard it should be noted that this report does not examine the question of how to plan to avoid such problems associated with the establishment of new mines in the future -- it deals with the question of how to cope with problems which may arise from existing situations.

Chapter Two in this report provides an overview of existing coal, metal, and asbestos mines in British Columbia, including current and projected levels of employment for the years 1990, 1995 and 2000. It includes a description of the key factors determining the economic life of each mine, and identifies possible mine closures that may occur before 1995, and between 1996 and 2000.

Chapter Three reviews recent experience with significant closures in British Columbia, and with near closures during the 1982 to 1986 period, and attempts to distill the common elements. It provides an analysis of community dependence on selected mines, and focusses on the possible mine closures identifed in Chapter Two and the impacts on affected workers and communities.

In Chapter Four existing community and labour adjustment programs and policy initiatives are documented.

Suggestions to improve the effectiveness of existing programs, or for new programs to deal more effectively with mine closure related adjustment problems, are made in Chapter Five. Chapter Six provides a brief summary of the report.

CHAPTER TWO

LIFE EXPECTANCIES FOR EXISTING MINES

This chapter provides an overview of the *existing* major coal, metal, and asbestos mines in British Columbia, and projects output and employment for these mines for the years 1990, 1995, and 2000. The chapter includes a general description of the main factors influencing the level of output in the mining industry and a qualitative description of the key factors that are expected to influence a closure or significant reduction in operations at each of the major mines.

It should be stressed that this chapter does not provide a rigorous forecast of future mine closures, because, with the number of factors that have an important bearing on closure decisions, we do not feel that accurate forecasts can be made. We do feel, however, that we can identify those mines most likely to close and, for those cases where the closure decision will be based on exhaustion of orebodies, predict the time of closure within several years. It must also be stressed that the chapter does not provide a forecast of the "magnitude" of the mining industry in British Columbia through to the year 2000, as we only deal with the life expectancies of existing major mines. Other major potential mines, such as Kutcho Creek (copper, zinc, silver), Cirque (lead, zinc, silver), Schaft Creek (copper, molybdenum), Mount Klappan (anthracite coal), and the like are not considered in this report. Nor are the many smaller precious metal mines that may come into production between now and the year 2000.

2.1 Factors Affecting Mine Closure Decisions

A decision to close a major mine is not taken lightly. Given the very significant capital investment in a mine and mill, an investment which becomes a "sunk cost" once it is made, mining companies will generally prolong operations as long as there is a prospect that there will be a positive cash flow (a calculation which, incidentally, will take account of income tax offsets within the company from depletion or depreciation, as well as the user cost of mining the ore today rather than in the future). A closure may in itself be costly -- requiring termination agreements with employees, and site reclamation -- both of which may involve significant commitments. Because of this, a company may choose to continue to operate in the short run, even with a negative cash flow, if it perceives that in a reasonable period of time conditions will improve. The simple economics may be such that operating for a year with negative cash flows may be cheaper than closing -- if the future is thought to hold a period in which substantial earnings can be realized. The major factors thought to bear on a mine closure decision are, therefore, price expectations, fixed operating costs (including taxes), variable operating costs, and ore reserves. Once a mine goes through a permanent closure, it would take much higher long run prices to stimulate a reopening.

2.1.1 Price Expectations

The price experiences of the major metals and minerals produced in British Columbia, monthly for 1985 to 1989 and annually for 1963 to 1988, is charted in Figures 2.1 through 2.14. Two decades ago Gaffney (ref. #3) wrote:

> *We need a better idea of where we are now in the pattern of long swings of overexpansion and collapse which have characterized extractive industries.*

A person reviewing the price performance of most major metals since that time would probably feel that while developing that understanding is perhaps even more important today, there is not much likelihood that a clear picture of future prices can be developed.

Only a few years ago, when the Critical Industries Commission was working to forestall closures in several major mines the outlook for copper was poor and the price was not expected to rise above $0.65 (US), or approximately $0.90 Cdn, per pound in the 1985 to 1990 period. In 1986 copper prices averaged $0.62 (US) per pound ($0.86 Cdn); in 1987 the copper price averaged $0.80 (US) ($1.06 Cdn); in 1988 the average was $1.18 (US) ($1.45 Cdn); and in 1989 prices averaged $1.54 (US) ($1.83 Cdn) during January. The one certainty about short term price forecasts is that they are likely to be wrong, and it appears that instability may have become characteristic of even the base metal markets in recent years.

Despite the erratic performance of short run prices, given a reasonable underlying *longer run trend* expectation, most major mines are expected to maintain production.

FIGURE 2.1
MONTHLY AVERAGE COPPER PRICE
LME GRADE A CASH

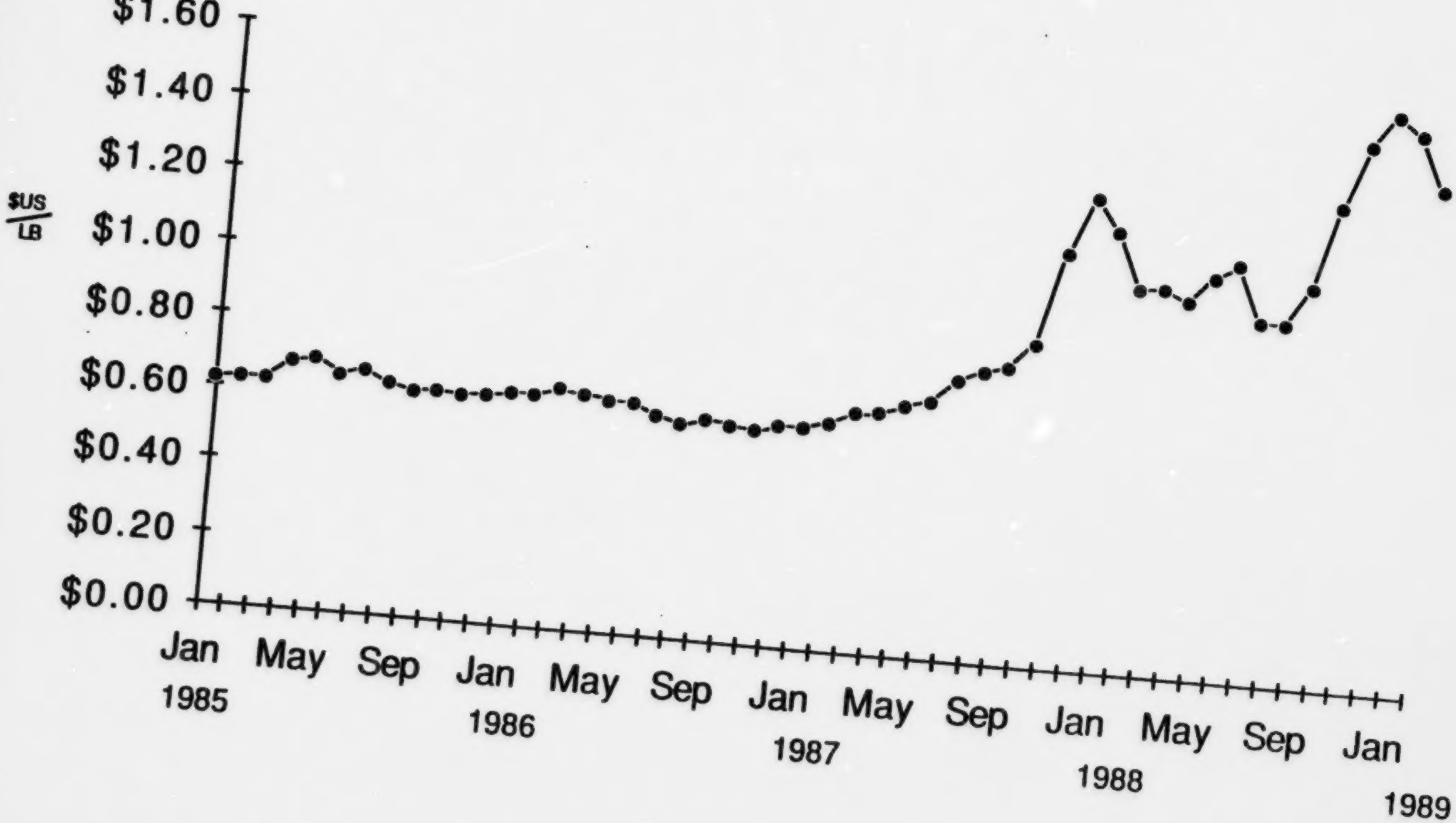


FIGURE 2.2
ANNUAL AVERAGE COPPER PRICES
LME HG CASH

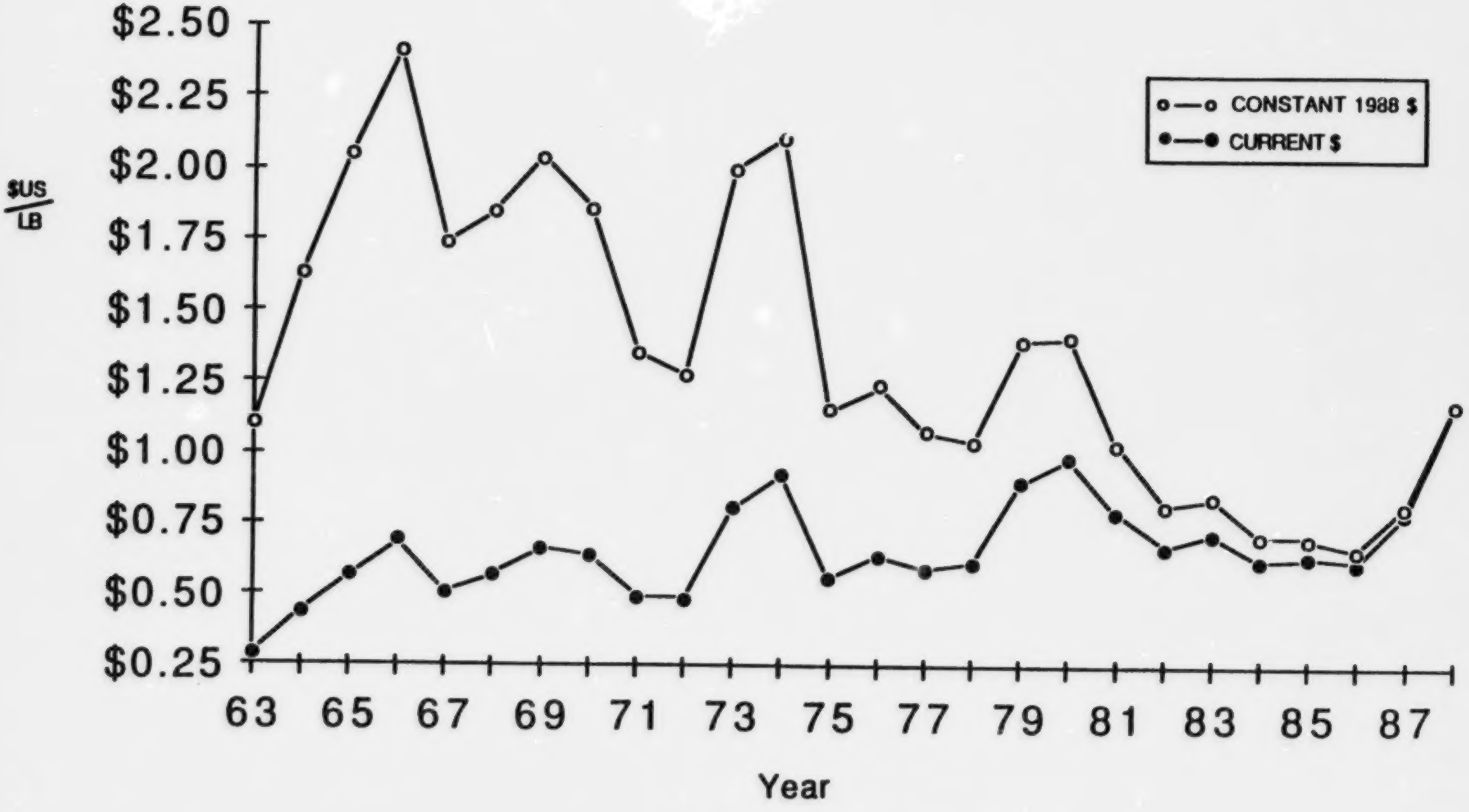


FIGURE 2.3
MONTHLY AVERAGE MOLYBDENUM PRICE
DEALER OXIDE

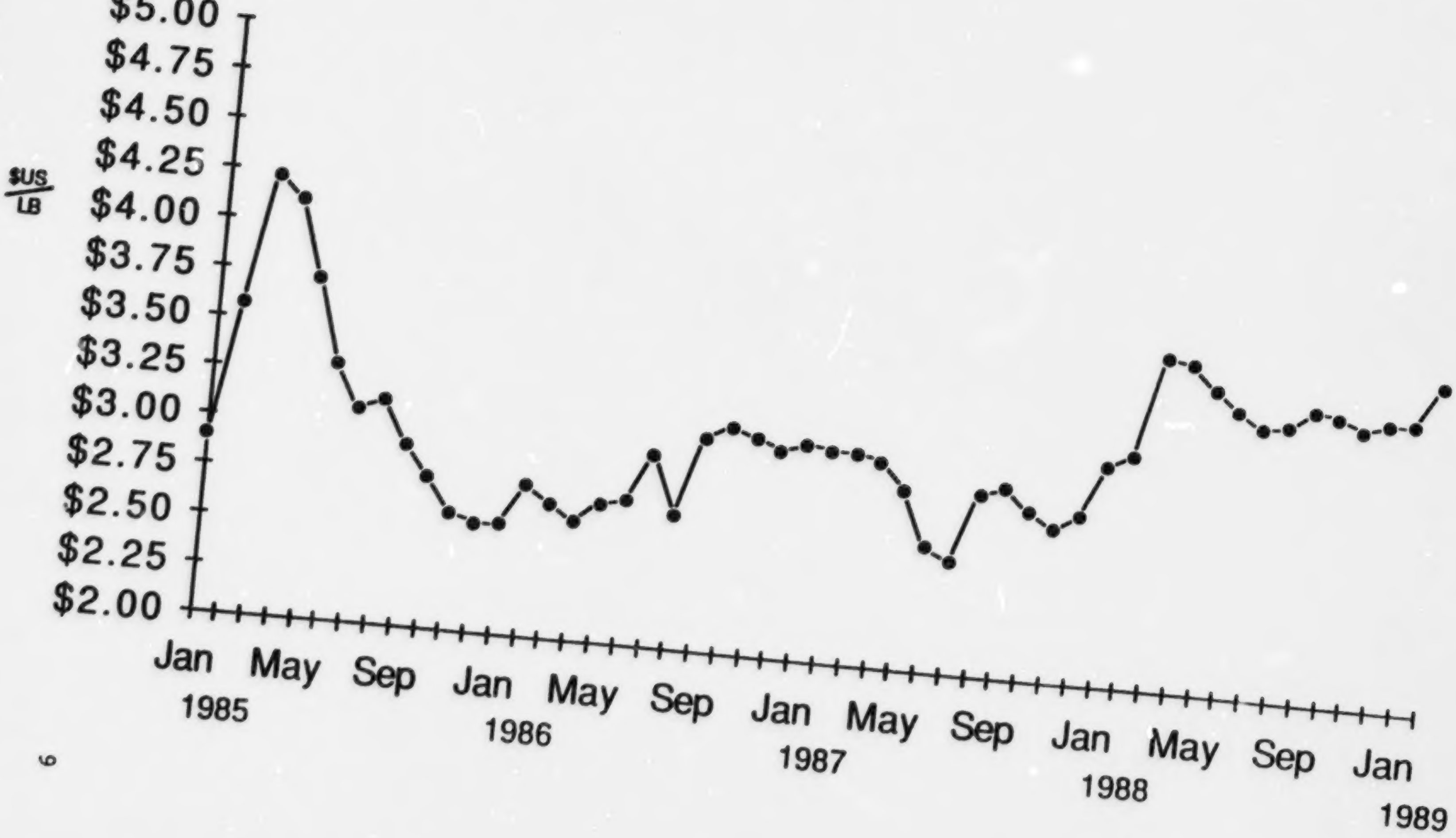


FIGURE 2.4
ANNUAL AVERAGE MOLYBDENUM PRICES
MW DEALER OXIDE

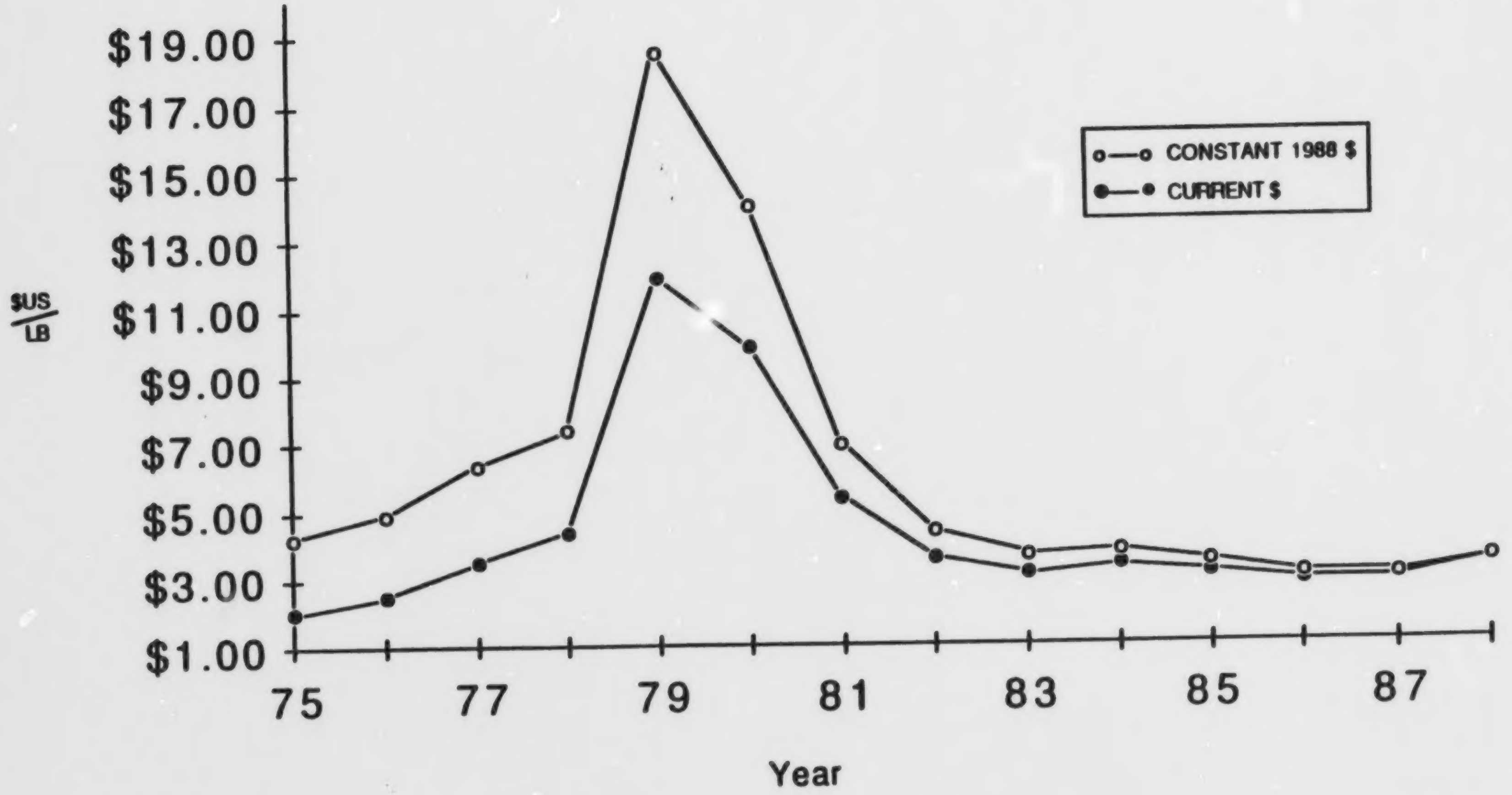


FIGURE 2.5
MONTHLY AVERAGE ZINC PRICE
US HIGH GRADE PRODUCER

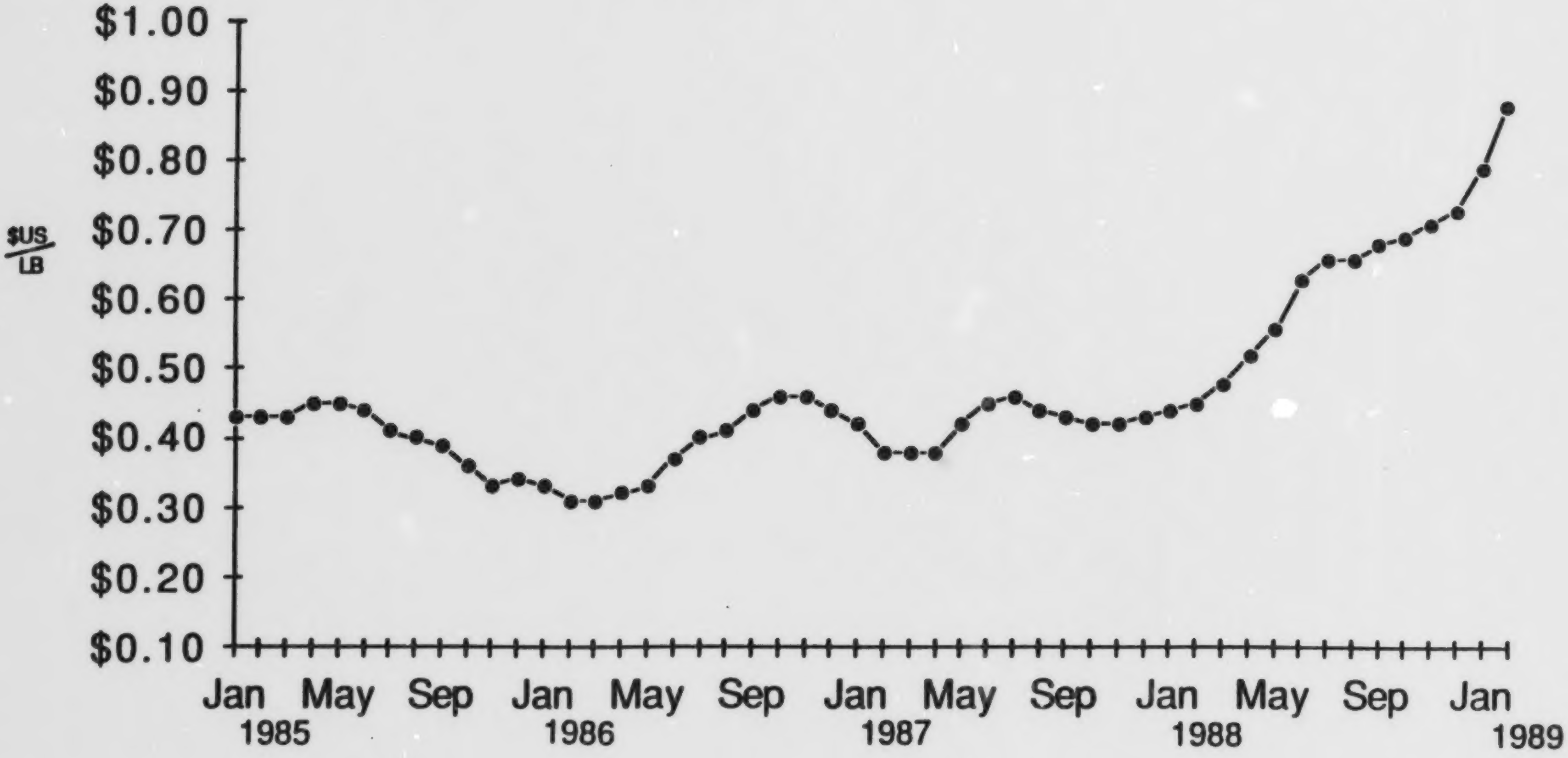


FIGURE 2.6
ANNUAL AVERAGE ZINC PRICES
LME CASH

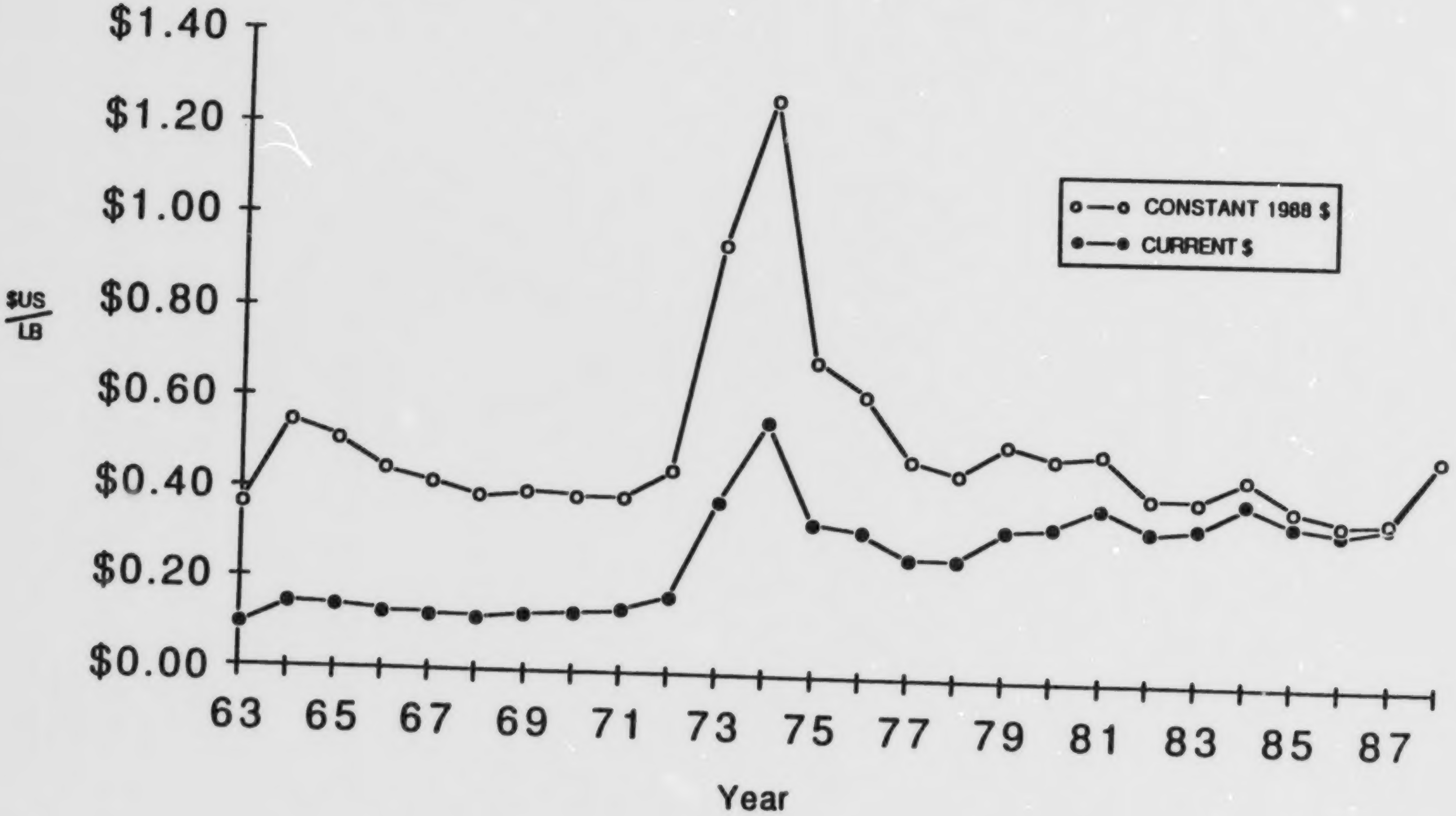


FIGURE 2.7
MONTHLY AVERAGE LEAD PRICE
US PRODUCER

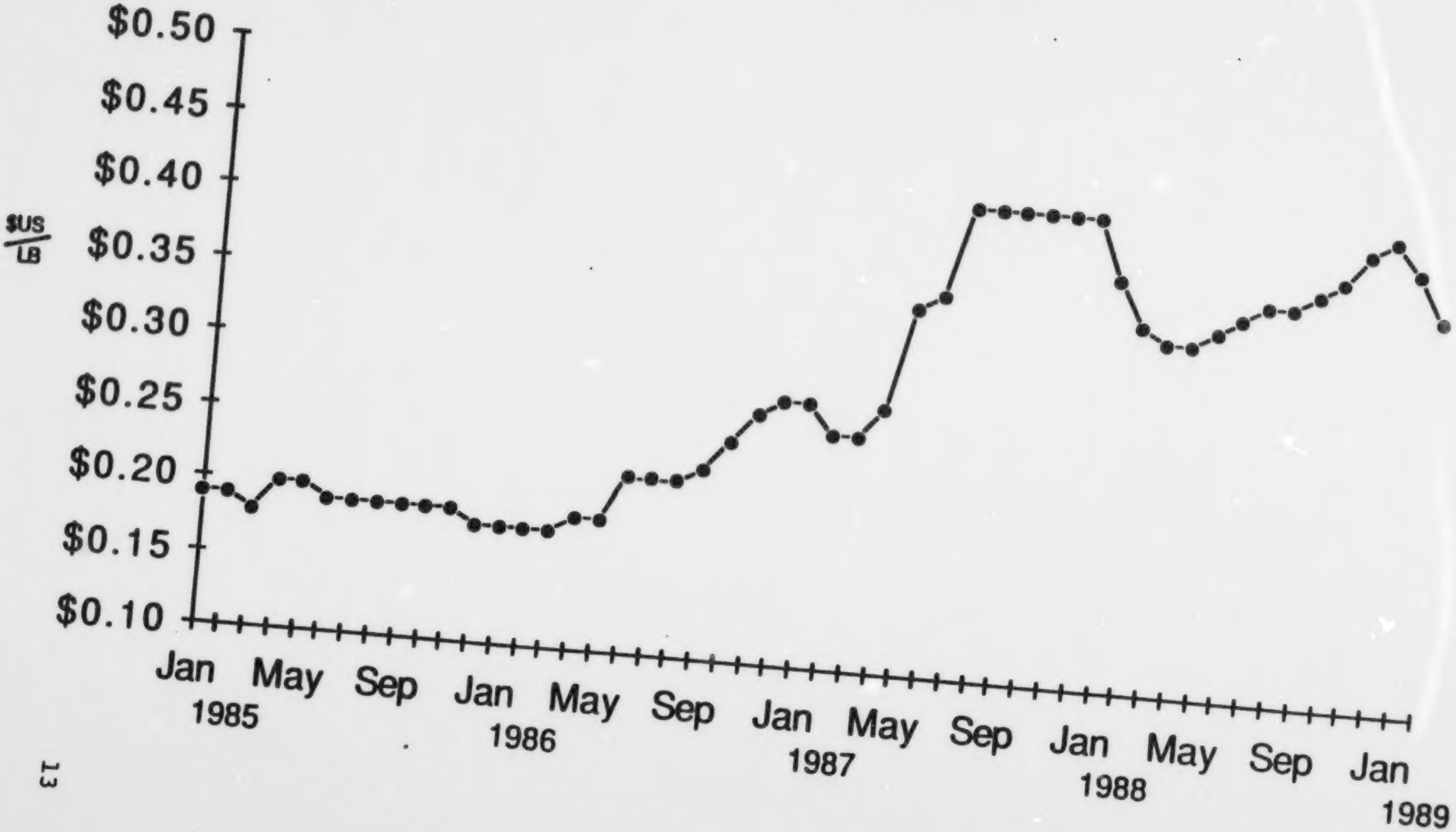


FIGURE 2.8
ANNUAL AVERAGE LEAD PRICES
LME CASH

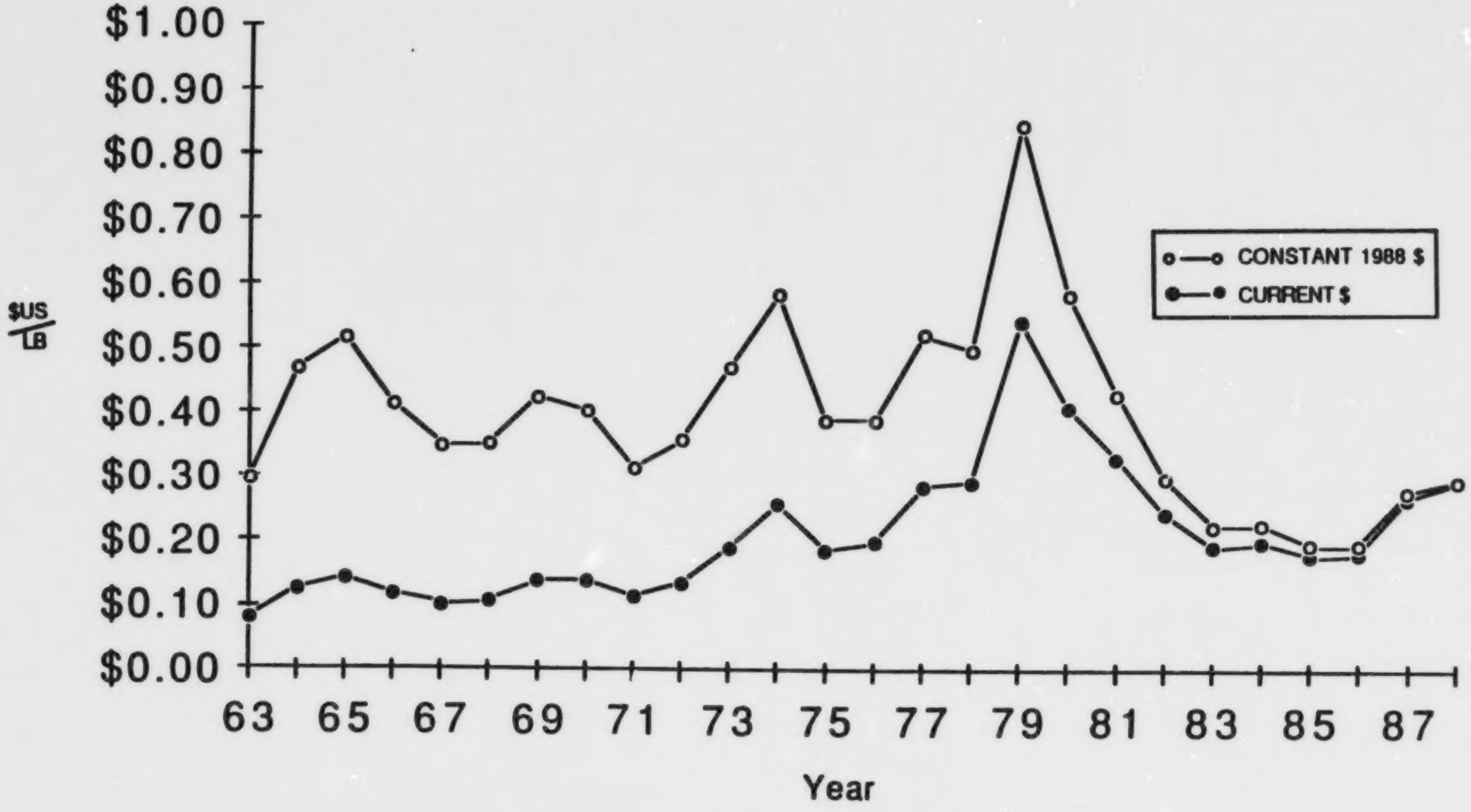


FIGURE 2.9
MONTHLY AVERAGE GOLD PRICE
LONDON FINAL

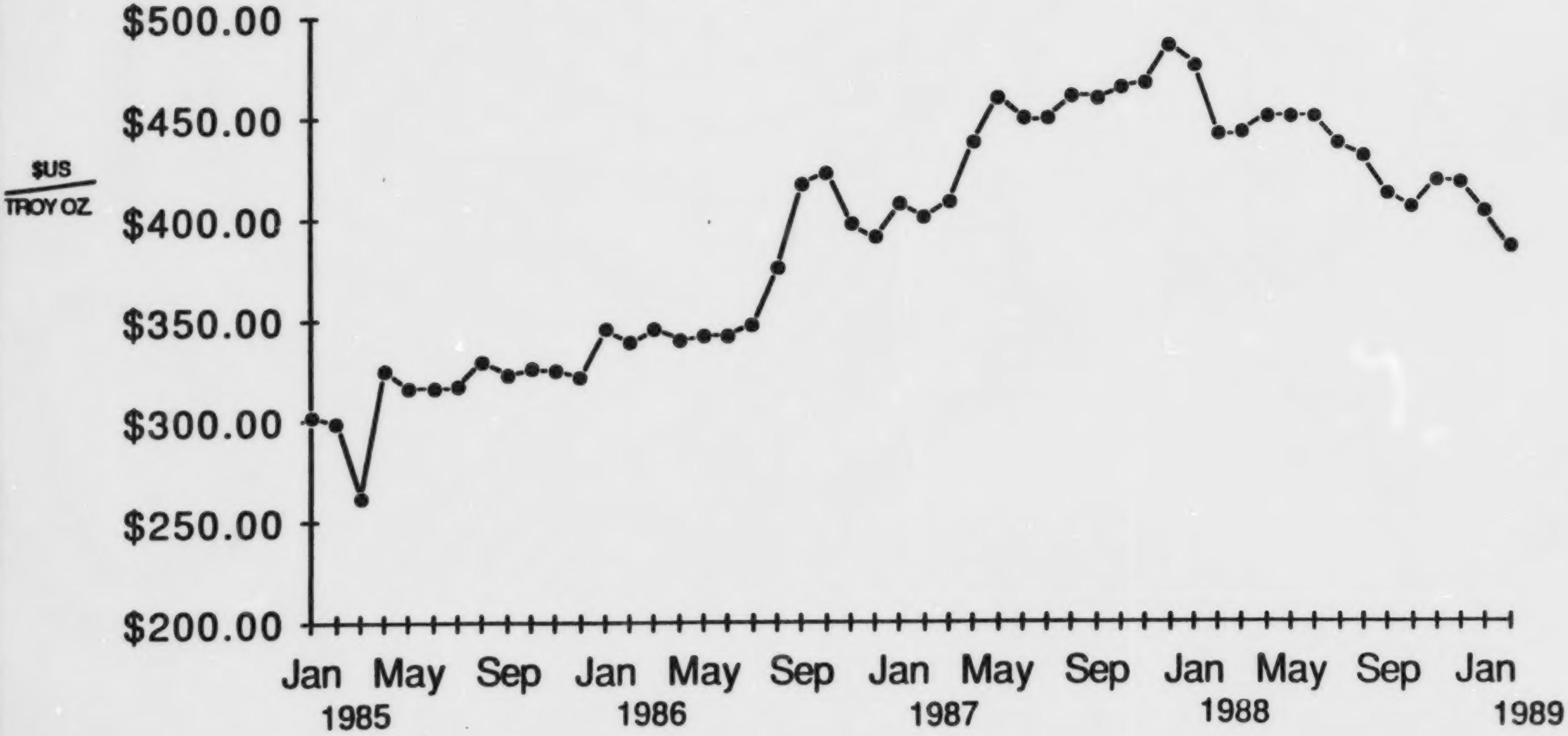


FIGURE 2.10
ANNUAL AVERAGE GOLD PRICES
HANDY/HARMAN

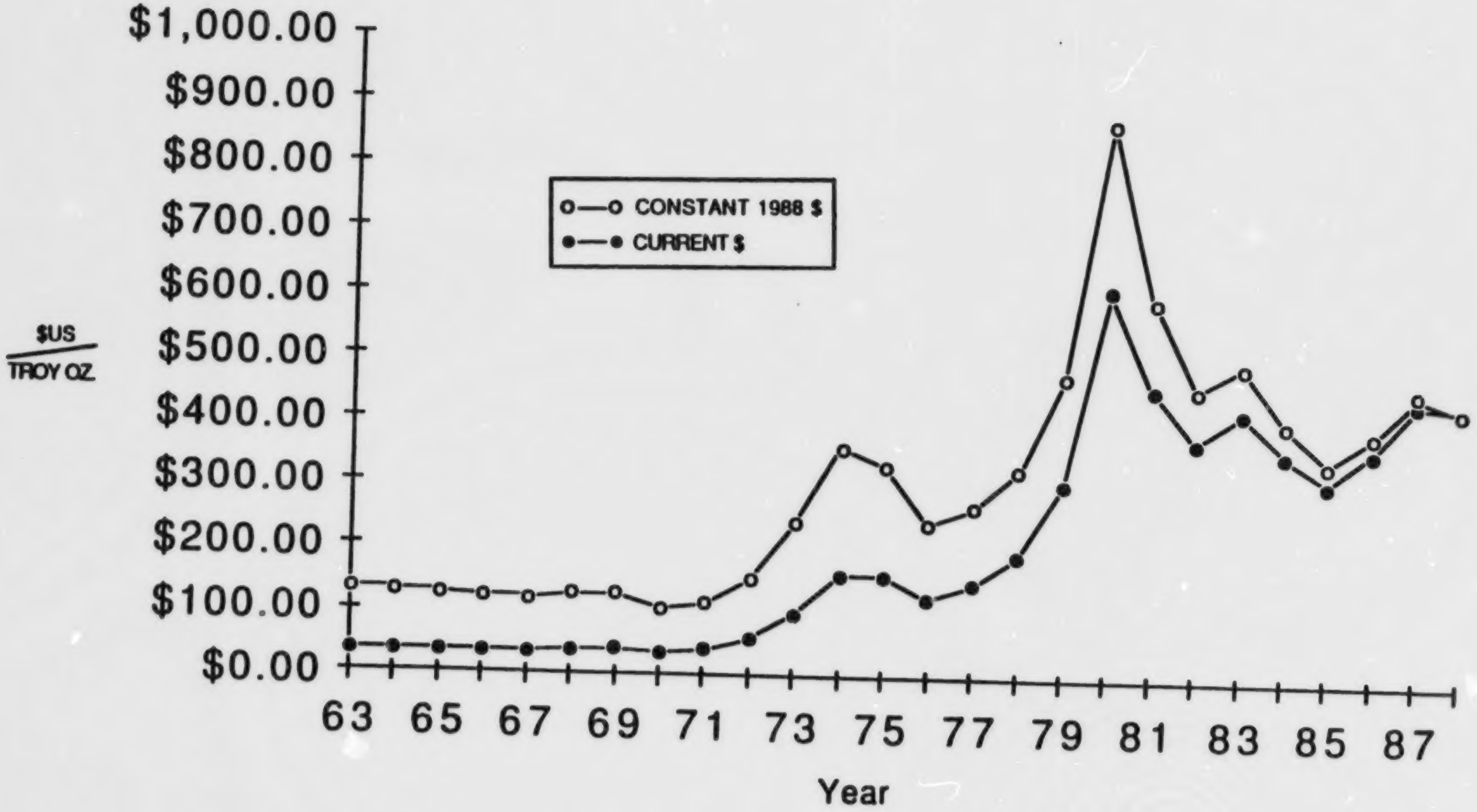


FIGURE 2.11
MONTHLY AVERAGE SILVER PRICE
HANDY AND HARMAN

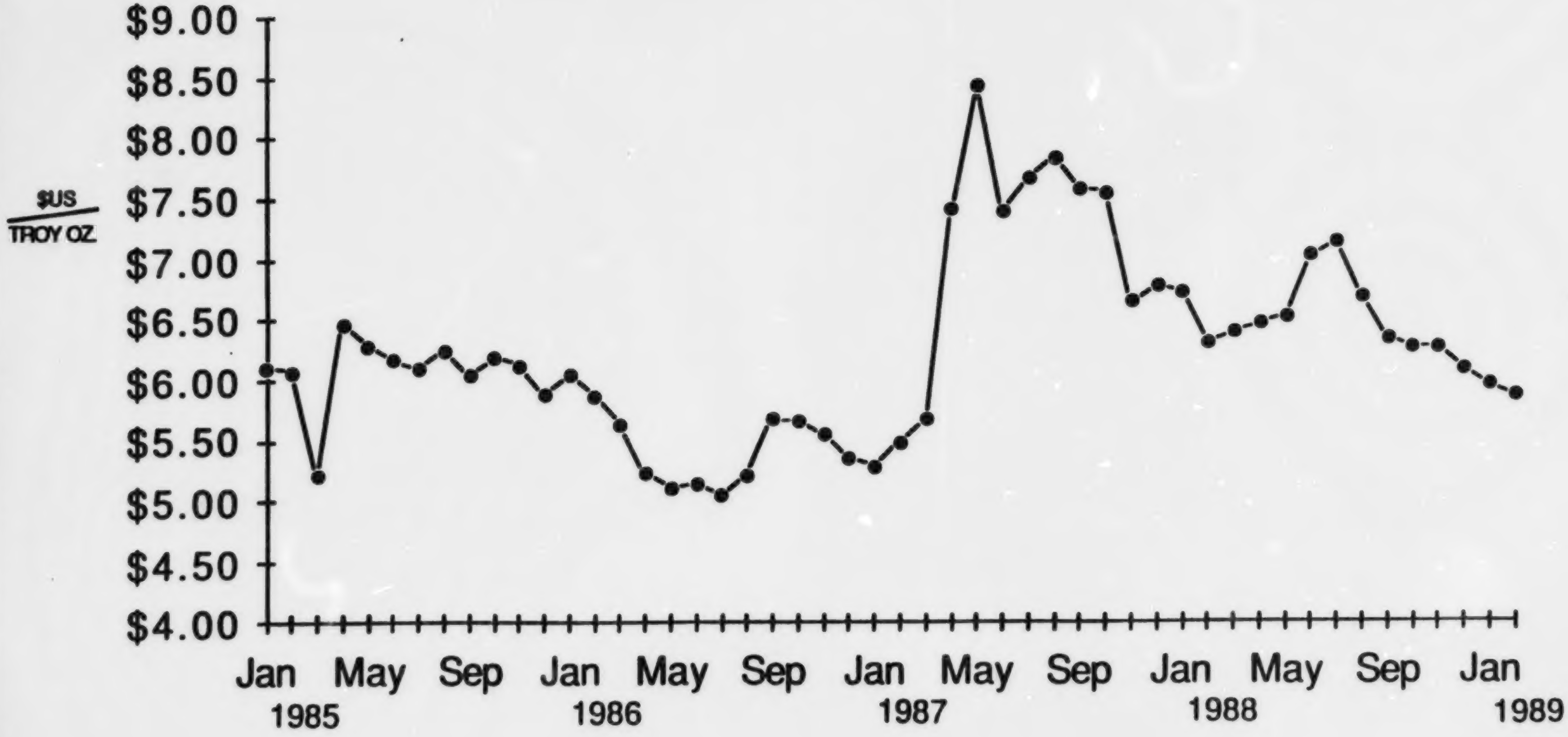


FIGURE 2.12
ANNUAL AVERAGE SILVER PRICES
HANDY/HARMAN

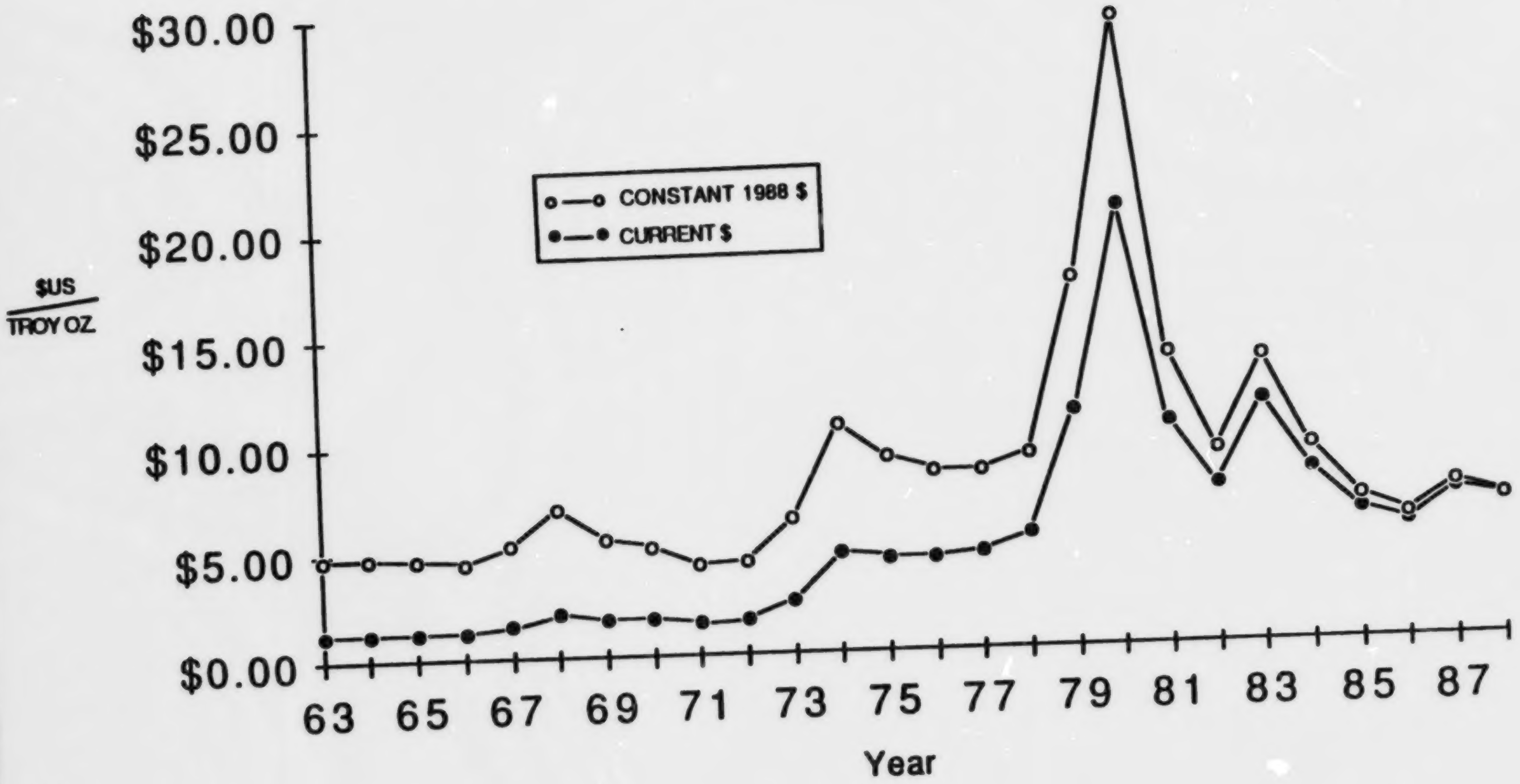


FIGURE 2.13
MONTHLY AVERAGE COAL PRICE
TEX REPORT/COAL MANUAL

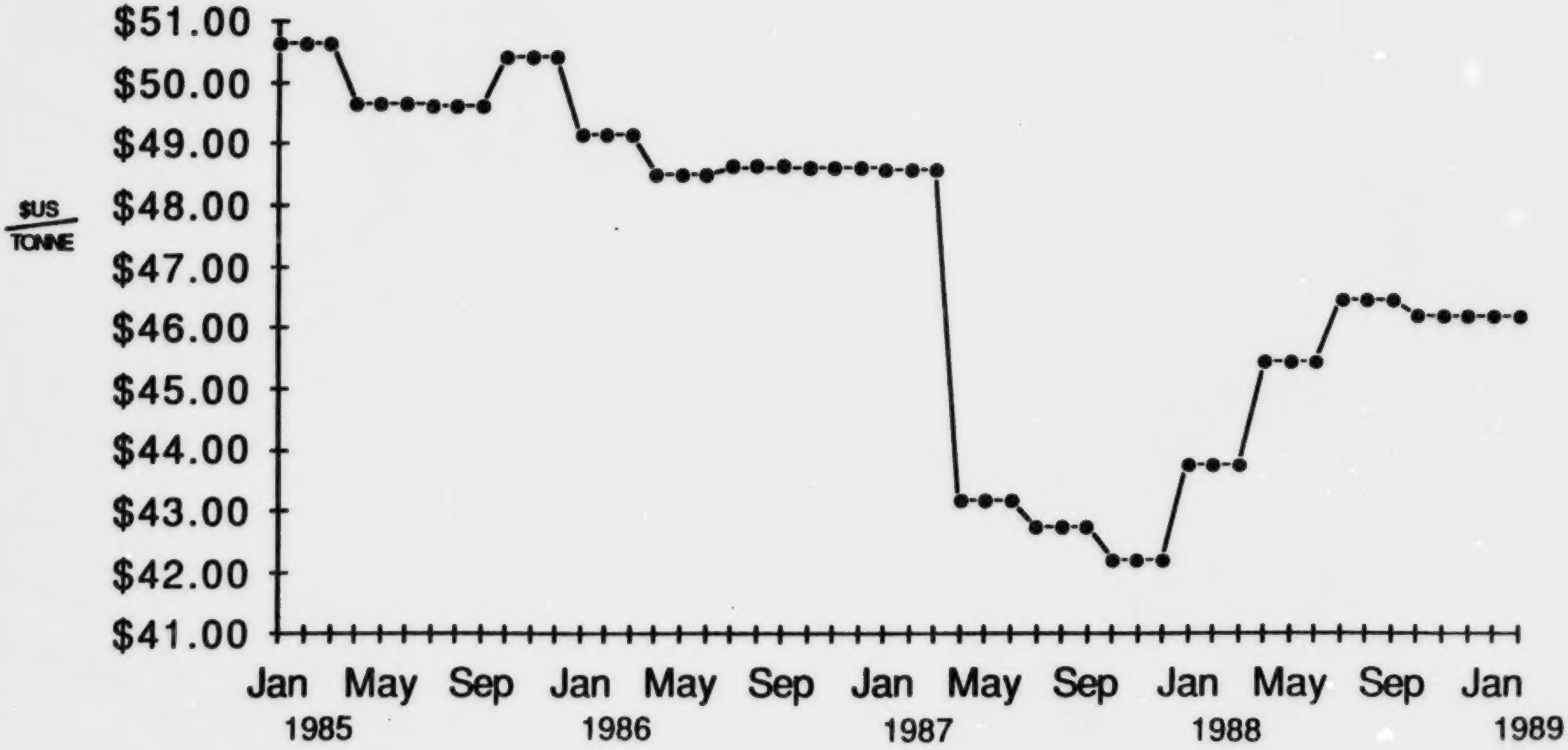
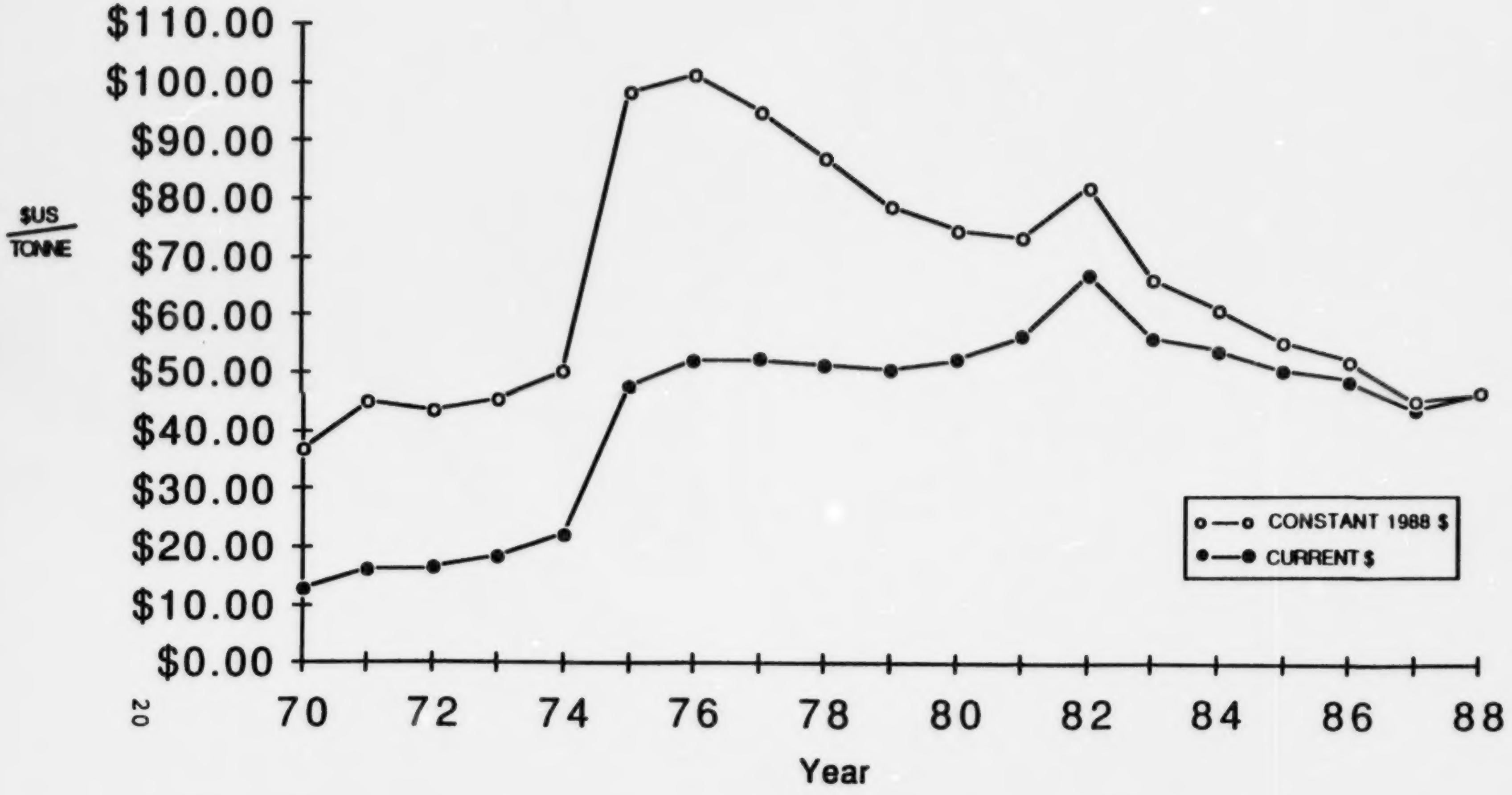


FIGURE 2.14
TYPICAL SEBC COAL PRICES
TEX REPORT/COAL MANUAL



However, long term trends in themselves are risky predictors of future prices, as recent history demonstrates. Some major mines in British Columbia were not profitable at prices in the 1982 to 1986 period and closed temporarily. For others closure was averted through the mediation of the Critical Industries Commission, which strategically used the surplus power available at discount prices through BC Hydro and arranged other cost concessions. Still other mines avoided closure through independent cost reductions. These mines, primarily copper/molybdenum producers, are operating profitably now but with reserves that have been drawn down by four or five years, and with finite reserves and remaining operating lives.

Maintenance of prices at average 1987/88 levels should, however, ensure that production is maintained. In addition, it is possible that in response to these prices mine lives can be extended somewhat. A sudden weakening of prices, on the other hand, would likely lead to quick decisions to close. That follows from the companies' recent experience with the costs of operating through the 1982 to 1986 period and the fact that reserves have been reduced by several years of operation since then. Faced again with the prospects of incurring operating losses for what they would hope to be a relatively short time, the offsetting time period when they might expect to operate profitably, when prices recover, is now shorter than was formerly the case. The economic calculus is thus more likely to favour closure in this case than in the 1982 to 1986 period.

As far as the influence of price on closure decisions in existing major British Columbia metal mines is concerned, therefore, we expect only modest "upside" potential to extend mine lives should prices hold at present levels. Most of the major closures anticipated in the near future are driven by expected resource exhaustion, and opportunities to extend in response to higher prices are limited. There is a considerable "downside" if prices fall significantly, however -- in that a number of companies can be expected to respond with permanent closures, prior to final exhaustion of ore bodies.

Coal appears to be a special case with respect to the influence of price on major closure decisions. Prices for both metallurgical and thermal coal are just beginning to trend upward from a cyclical trough, and continuation of this trend is important to sustain production at several major mines that, at current prices, are able to cover their cash costs but not service their debt (Coal Association of Canada, ref. #2). Continued recovery in coal prices may provide the necessary "breathing room" for financial restructuring to take place; should prices fall precipitately the opportunity for restructuring might be lost and several major closures brought on. Thus there would appear to be a considerable "upside" if prices continue to firm, and a "downside" response, comparable to that for several major metal mines, should prices weaken.

2.1.2 Operating Costs

Operating costs can be very mine-specific. Information on the cost schedules faced by individual mines is not widely available, although some inferences can be drawn from responses to the low prices of the 1982 to 1986 period. What that period did reveal was that costs can be reduced, at least in the short run, to accommodate low commodity prices. Cost reduction was initially achieved through short run "concessions" (labour, power, property taxes, etc.) that were intended to be withdrawn if prices rose above certain benchmark levels, although in some cases the changes (e.g., the decertification at Endako) were of a permanent nature. In the longer run, and on an on-going basis, introduction of new technology and increased labour productivity have contributed to significant cost reductions. Rationalization of mine operations can also be undertaken to achieve cost reductions -- as with copper production in the Highland Valley.

The extent to which operating costs can be lowered to affect mine closure decisions in the next decade is uncertain. Those mines which might be able to further reduce costs through restructuring of mine plans (copper in the Highland Valley; coal in the East Kootenay region; and as some have suggested, the Quintette coal mine in the northeast) are not among those that we expect to close before the year 2000. The others, with a shorter life expectancy in any event, are less likely to be able to extend operations through cost reduction. Much depends on prevailing economic conditions -- if workers can find employment elsewhere, and major suppliers such as BC Hydro have ready alternative markets for their products, they are unlikely to grant short term concessions to avoid closure as they did in the 1985 to 1987 period.

Taxes on output (royalties) are regarded as an operating cost by producers, and in theory at least could be changed so as to affect costs and influence closure decisions. But, despite repeated arguments by academics (Steele, Gaffney - ref. #3) and others (Coal Association of Canada, ref. #2) that royalties or severance taxes tend to drive marginal ores out of use and precipitate closures, governments have been reluctant to reduce or waive royalties for individual mines. However, governments do review policies on royalties and income taxes on an industry and mineral commodity basis from time to time. While the government could change its stance on taxes and royalties within the time frame that would affect coming closures (for example, the coal royalty could be reduced or eliminated), we have assumed that the tax or royalty component of operating costs will remain largely unchanged.

Expected operating costs are the obvious counterpoint to expected prices in the calculations that go into a decision to close an existing mine. For the major British Columbia mines where a closure is anticipated before 2000 there do not appear to be significant prospects for the implementation of short term cost reductions, which would influence closure decisions and prolong mine life.

2.1.3 Ore Reserves

The two elements considered above, prices and costs, together determine what is considered an ore reserve in the sense that it is one with a positive economic value. It follows that economic ore reserves will vary constantly with prices and costs. Mine closures can be anticipated even when there is a substantial body of high grade ore left in the deposit (as is the case with several molybdenum mines) because of the price and cost situation. We have discussed above the bearing that price and cost, acting on known reserves/deposits, is likely to have on the major mine closure decisions that are expected before the year 2000. What is addressed here is whether reserves will be increased by further exploratory work that would, independent of prices and costs, lead to extension of mine life.

This is difficult to judge. When a decision is made to open a new mine, it is obviously expected that the reserves are adequate to justify the investment within an acceptable payback period. For a small precious metal mine it may be feasible to proceed with a relatively short expected life -- as for the Blackdome gold mine, with 6 years of estimated reserves, or the Lawyers gold mine with 5 years of estimated reserves, at time of start up. For a large base metal or coal mine, in contrast, a 20 to 25 year expected life may be necessary. Once in production and launched along its life-path, the aspect of reserves we are concerned with here is whether they will be augmented so as to extend mine life.

Outside of its original investigations leading to the basic feasibility decision (ie., measured reserves sufficient to amortize, with a reasonable return, the original capital investment), a mine will have little incentive to invest substantial sums in drilling and exploration to prove up reserves more than five or ten years in advance. There will be a desire to understand the fundamental geology of the orebody being worked, so that the mine plan can be developed consistent with exploitation of potential reserves in the long run, but beyond that there is little economic incentive to explore a given deposit and in effect establish "inventories" far in advance of intended use.

So, for the mines that are expected to close in the 1990 to 1995 period it can be inferred that the search for ore that would extend mine life has already taken place and the results are known. It is because of the failure to identify more reserves that closures in this period are indicated (setting aside price and cost considerations). For some of the mines now expected to close in the 1996 to 2000 period, the case may be considerably different. Given that these mines are now seen to have sufficient reserves to operate for 6 to 10 years, they perhaps have not yet felt the full incentive to prove up further reserves. It may be that in the early 1990s those incentives will come to bear on them and further drilling and exploratory work will take place. For some this may lead to expanded reserves and expected mine life; for others the search may be fruitless.

In terms of the forecasts made in this chapter, the implications are that extension of ore reserves is unlikely to alter expectations about closures in the 1990 to 1995 period. There is a chance that some of the mines indicated as closing between 1996 and 2000 may extend their reserves, however, and on that basis continue to produce into the next century. For those major mines now expected to close early in the 2000s, it has to be seen as equally likely that reserves may be extended.

2.2 Forecasts of Major British Columbia Mine Production

Forecasts of mine operation and employment are presented in Table 2.1, dealing only with *major* mines *currently in production*. The purpose is to indicate closures that may be anticipated before the end of the century. Other mines are in the development stage and may come into production during this period, offsetting the decline that would follow from the closures. The projections which have been developed do not attempt to encompass *all* mine production in British Columbia; therefore, and it is hoped that they will not be interpreted in that way.

Region 1 Vancouver Island/Coast

The major producing mines in this region for which projections are found in Table 2.1 are BHP Utah's *Island Copper Mine* and Westmin Resources Ltd.'s *H-W-Lynx Mine*. Westmin's operation commenced in 1967 with expectations of a 20 year life. As mine operation progressed additional reserves have been developed so that, subject to a continuation of "reasonable" metal prices, the mine is now expected to operate to 2001 or beyond -- an actual life of 35 years or more. In contrast, Utah's Island Copper Mine, which began in 1971 with a 20 year expected life has been unable to identify significant additional reserves. The company is committed to development of the "ocean zone" ore deposit which will extend operations to 1995. When this pit has been "worked out", ore exhaustion will lead to closure, independent of operating cost or metal price considerations. Discovery of additional ore bodies is currently seen as quite unlikely. However, there is some stockpiled ore that could sustain operation of the mill until 1997 at a reduced employment level of between 400 and 450 persons. It seems certain that a permanent closure of the Island Copper mine, with loss of the final 450 jobs, will take place in the first half of 1997.

Region 3 Thompson Okanagan

The major mines dealt with in this region are copper or copper/molybdenum producers. Cassiar Mining Corporation's *Similco Mine*, employing about 340 workers; Noranda's *Brenda Mine*, with 420 workers; the Teck Corporation (and partners) *Afton Mine*, with a workforce of 180; and the mines operated as the *Highland Valley Copper Partnership*, which employ over 1,300. Two precious metal mines are found in the region -- Corona Corporation's *Nickel Plate Mine* with 190 employees and Blackdome Mining Corporation's *Blackdome Mine* with 140 employees.

Among the copper mines the earliest and most certain closure expected is that of the Brenda Mine. Put into production in 1970 with an expected life of 20 years, based on known reserves, additional reserves have not been identified and closure is scheduled for 1990 pretty much in keeping with original expectations.

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES

				ESTIMATED 1988 PRODUCTION									
MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)	ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	PROBABLE SHUTDOWN DATES EARLIEST	LIKELY	ESTIMATED EMPLOYMENT 1988	1990	1995	2000
REGION I VANCOUVER ISLAND/COAST													
Island Copper Mine	BHP-Utah Mines Ltd.	1971	20 years +	16,700[1]	Cu 52,000[1] Mo 5,000 Au 1.7 Ag 10.3	8 years including Ocean Zone	low probability	1995	1997	547	560	450	nil
H-W-Lynx Mine	Westmin Resources Ltd.	1967	20 years +	1,140[2]	Cu 25,600 Au 1.3 Ag 27 Zn 50,600 Pb 200	10 years of geologic reserves[3]	several possibilities exist; constrained by location in park	1991	2010 +	668	700	700	700
REGION III THOMPSON-OKANAGAN													
Similco Mine	Cassiar Mining Corp (formerly Newmont Mining Corp.)	1972	20 years	7,200	Cu 27,200 Au 0.5 Ag 11.6	7 years (49 x 10^6MT)	several[4] possibilities exist	1995	1995 +	339	340	340	0-340

---

[1] Milling rates for 1989 to 1995 will increase to 17.5 million tonnes per year and contained copper will average 52,000 tonnes per year.

[2] Milling rates for 1989 and the 1990s are projected to average 1.3 million tonnes per year.

[3] Geologic reserves were reported as 12.1 million tonnes at the end of 1988, indicating a mine life of just under 10 years if all reserves are mineable. Indicated and inferred resources should sustain the mine for a further 10 years or more.

[4] A further 46 million tonnes of ore exist in Pit #2 averaging .35 percent copper at a strip ratio of 1.75/1. These reserves would require sustained copper prices above $.80/lb (US) to develop, but would add another 6 years to the mine's life.

Cu = Copper, Mo = Molybdenum, Au = Gold, Ag = Silver, Zn = Zinc, Pb = Lead, Asb = Asbestos, MC = metallurgical coal, TC = thermal coal

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES continued

				ESTIMATED 1988 PRODUCTION				PROBABLE SHUTDOWN DATES		ESTIMATED EMPLOYMENT			
MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)	ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	EARLIEST	LIKELY	1988	1990	1995	2000
Nickel Plate Mine	Corona Corp.	1987	10 years +	880	Au 2.8 Ag 1.6	9 years	some possibilities; exploration underway		1997	195	190	190	nil
Brenda Mine	Brenda Mines Ltd. (Noranda)	1970	20 years	11,300	Cu 18,000 Mo 4,000 Au 0.1 Ag 8.0	2 years	low probability	1990	1990	421	420	nil	nil
Afton Mine	Afton Mines Ltd. (Teck Corp.) (Metallgesellschaft)	1977	8-10 years open pit	2,800	Cu 8,000 Au 0.5 Ag 3.5	0.5 years 7-8 years (Ajax pit)	possible development of underground reserves, depending on prices, could add 7-8 yrs	1997	1997+	181	180	180	nil
Highland Valley Mine	HVC Partnership (Cominco Ltd. Lornex Mining Corp. Highmont Mining)	1987	20 years	44,100	Cu 170,000 Au .38 Ag 58 Mo 2,000	19 years ($847x10^6$MT)	J-A zone, A zone possible use of Highmont ore	2007	2007+	1,396	1,310	1,360	1,310
Blackdome Mine	Blackdome Mining Corp. (MPC Mining)	1986	6 years	77	Au 1.6 Ag 4.0	4 years	exploration underway	1992	1993	142	140	nil	
REGION IV KOOTENAYS													
Balmer Mine	Westar Mining Ltd.	1969	25 years +	10,974	MC 6,463,000 TC	17 years +	several possibilities including Dominion Coal Block		2005+	1,182	1,000	1,000	1,000
Byron Creek Mines	Byron Creek Collieries Ltd. (Esso Resources)	1972	25 years +	1,379	TC 1,030,000	17 years +	several possibilities		2005+	197	200	200	200

Cu = Copper, Mo = Molybdenum, Au = Gold, Ag = Silver, Zn = Zinc, Pb = Lead, Asb = Asbestos, MC = metallurgical coal, TC = thermal coal

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES continued

MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ESTIMATED 1988 PRODUCTION		ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	PROBABLE SHUTDOWN DATES		ESTIMATED EMPLOYMENT			
				ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)			EARLIEST	LIKELY	1988	1990	1995	2000
Line Creek Mine	Crows Nest Resources Ltd. (Shell Canada Resources)	1982/83	20 years +	2,917	MC 2,095,000 TC	17 years +	several possibilities		2005 +	446	450	450	450
Greenhills Mine	Westar Mining Ltd.	1982/83	20 years +	4,043	MC 3,054,000 TC	17 years +	some possibilities		2005 +	586	585	585	585
Fording River Mine	Fording Coal Ltd. (Canadian Pacific Ltd.)	1972	25 years +	8,646	MC 6,020,000 TC	17 years +	several possibilities including Elk River property		2005 +	1,050,	1,050	1,050	1,050
Sullivan Mine	Cominco Ltd.	1922	50 years +	2,038	Zn 92,000 Pb 89,900 Ag 106	10/11 years ($24x10^6$MT)	some possibilities exist	1996/97	1998/99 +	845	840	500	nil
REGION V CARIBOO													
Gibraltar Mine	Gibraltar Mines Ltd. (Placer Dome)	1972	20 years +	5,500[1]	Cu 13,600[1,2] Mo 115[1]	13/14 years ($180x10^6$MT)[3]	low grade reserves exist to extend mine past 2002/3 +	1999	2002 +	271	270	270	200

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[1] These 1988 production rates were substantially reduced due to a strike which lasted 6.5 months. The comparable 1987 production figures were: ore milled - 12.6 million tonnes, Cu - 33,500 tonnes; Mo - 560 tonnes.

[2] The Cu production figures exclude 5,000 tonnes of high grade cathode copper obtained from the heap leaching operations.

[3] Excludes the Cuisson Lake Mines reserves estimated at 5 million tonnes, grading .334 percent Cu and .01 percent Mo.

Cu = Copper, Mo - Molybdenum, Au = Gold, Ag - Silver, Zn = Zinc, Pb = Lead, Asb = Asbestos, MC = metallurgical coal, TC = thermal coal

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES continued

				ESTIMATED 1988 PRODUCTION				PROBABLE SHUTDOWN DATES		ESTIMATED EMPLOYMENT			
MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)	ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	EARLIEST	LIKELY	1988	1990	1995	2000
REGION VI NORTH COAST													
Silbak-Premier	Westmin Resources Ltd. Pioneer Metal Canacord	1989	10.5 years	nil (730)[1]	nil (Au 2.8)[1] (Ag 28.0)	10.5 years	several possibilities exist in vicinity	1999	2000+	nil	160	160	160
Johnny Mountain	Skyline Explorations Ltd.	1988/89	5-7 years	nil (108)[1]	nil (Au 2.0)[1] (Ag 3.0)	6 years	several possibilities exist in vicinity	1995/96	same	30	115	30	nil
REGION VII NECHAKO													
Endako Mine	Placer Dome Ltd.	1965	25 years +	7,500	Mo 5,080	18 years ($134x10^6$MT)	N/A	2006	2006+	142	220	220	220
Equity Silver Mine	Equity Silver Mines Ltd. (Placer Dome Ltd.)	1980	10 years +	3,227	Cu 6,760 Au 1.4 Ag 65	4 years ($11.5x10^6$MT)	underground reserves likely to be developed at much smaller rate of output	1992	1993	227	200	nil	nil
Bell Mine	Noranda Minerals Inc.	1972	20 years	5,369	Cu 21,000 Au .4 Ag 4.0	4 years	some possibilities exist	1992	1992	254	250	nil	nil

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[1] Proposed full production levels for Silbak-Premier and Johnny Mountain mines.

Cu = Copper, Mo = Molybdenum, Au = Gold, Ag = Silver, Zn = Zinc, Pb = Lead, Asb = Asbestos, MC = metallurgical coal, TC = thermal coal

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES continued

MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ESTIMATED 1988 PRODUCTION		ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	PROBABLE SHUTDOWN DATES		ESTIMATED EMPLOYMENT			
				ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)			EARLIEST	LIKELY	1988	1990	1995	2000
Cassiar Mine	Cassiar Mining Corp.	1952	30 years +	1,100[1]	Asb 106,000	1 yr (open pit) ($2.1x10^6$MT) 10 yr McDame underground ($16x10^6$MT)	some possibilities exist if markets continue	1999	2000+	320	350	400	350
Erickson Gold Mine	Erickson Resources Ltd.	1979	10 years	69	Au 1.3 Ag N/A	economic reserves exhausted	reserves under exploration	1989	N/A	107	N/A	nil	nil
REGION VIII NORTHEAST													
Quintette Mine	Qintette Coal Ltd. (Denison Mines Ltd.)	1983	20 years +	7,686	MC 4,697,000 TC	5 yrs at[2] short term market prices	several possibilities; Transfer pit and others	1994/95+	2000+	1,370[1]	1,000	200	nil
						15 yrs at[3] contract price	Babcock pit	2003+		1370[2]	1,200	1,200	1,200
Bullmoose Mine	Bullmoose Operating Corp. (Teck Corp.)	1983	20 years +	2,225	MC 1,712,000	15 yrs at short term market prices depends on transportation costs if Quintette closes	several possibilities exist	2003+	2005+	361	360	360	360

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[1] In 1988 approximately 1.9 million tonnes of ore was mined, but only 1.1 million tonnes was milled. The balance was stockpiled, bringing the total amount of stockpiled ore in the pit to some 1.6 million tonnes of ore that will be milled during 1989 and 1990 until the startup of McDame underground.

[2] Low price scenario.

[3] High price scenario.

Cu = Copper, Mo = Molybdenum, Au = Gold, Ag = Silver, Zn = Zinc, Pb = Lead, Asb = Asbestos, MC = metallurgical coal, TC = thermal coal

TABLE 2.1: PRODUCTION, LIFE EXPECTANCY, AND EMPLOYMENT ESTIMATES FOR EXISTING BRITISH COLUMBIA MINES continued

				ESTIMATED 1988 PRODUCTION				PROBABLE SHUTDOWN DATES		ESTIMATED EMPLOYMENT			
MINE BY REGION	OWNER/ OPERATOR	DATE OF STARTUP	ESTIMATED MINE LIFE AT STARTUP	ORE MILLED ('000 MT)	CONTAINED MINERALS (MT)	ESTIMATED MINE LIFE AT AVERAGE OF 1987/88 PRICES	PROBABLE EXTENSIONS TO MINE LIFE	EARLIEST	LIKELY	1988	1990	1995	2000
Lawyers Mine	CheniGold Corp.	1989	5 years +	nil (175)[1]	nil (Au 1.0)[1] (Ag 30.9)[1]	5 years +	several possibilities exist for co-production	1993/94	same	nil	138	nil	nil

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[1] Proposed production for Lawyers Mine.

Cu - Copper, Mo - Molybdenum, Au - Gold, Ag - Silver, Zn - Zinc, Pb - Lead, Asb - Asbestos, MC - metallurgical coal, TC - thermal coal

After Brenda, the Afton mine is the next prospect for a closure. The current mine began production in 1977 with expectations of an 8 to 10 year operating life, and was largely exhausted in 1988 (with the processing of low grade stockpiled ore taking place in early 1989). The nearby Ajax pit is being developed, however, and with the ore from that pit trucked to the Afton mill production is now expected to be maintained through 1997. At that time a closure of the Afton operations is forecast, as there are no known open pit ore reserves in the area that would be developed to sustain continuing production. There are underground reserves available, but for these to be put into production would require confidence that higher, long term prices would be sustained.

The Similco Mine near Princeton is the next most likely to close. It started production in 1972 with sufficient reserves for 20 years of operation. Additional reserves have been developed, however, and if prices and operating costs hold at reasonable levels, production will have been extended to 1995 or 1996. Further deposits are known to exist and, if committed to development before 1995, they could extend the mine life until at least 2000 and perhaps beyond. We have chosen to indicate a shutdown around the year 2000 for the purposes of this report.

The Highland Valley Copper Partnership is expected to operate well beyond the year 2000, to 2007 or longer, on the basis of the ore bodies presently being mined. After that time operations could be continued if it were economical to mine the J-A zone, the A-zone, and possibly the Highmont reserves.

In contrast to the copper mines, the precious metal mines tend to have shorter life expectancies from the outset. At the Nickel Plate mine initial expectations were for 10 years of operation, from 1987 to about 1997. It is understood that there has been some re-evaluation of the geology of the orebody, and that closure could now come sooner. The possibility that nearby ore deposits could be developed and, using the Nickel Plate mill, extend overall operations is not felt to be strong, so a closure in the 1995 to 2000 time frame is indicated. The Blackdome mine is similar, operating within an even more compressed time line. The expected life of this mine at opening in 1986 was 6 years, and a closure in 1992 (possibly extended to early 1993) is still anticipated. Certainly a closure before 1995 should be expected for this mine.

Region 4 Kootenays

Two types of mines are dealt with in this region -- Cominco's lead zinc silver mine at ***Sullivan***, which has produced for decades, and the relatively youthful coal mines of the southeast coal fields.

The Sullivan lead zinc silver mine, after some 70 years of production has entered its final phase. Further extension of mining into lower grade ores is seen as highly unlikely. Closure of this underground mine in effect began with a decision to stop extending the mine and begin the process of "retreat", which involves mining out the pillars of ore that have been left throughout the mine life. Closure will thus be a lengthy process in itself, and one in which some reasonably high grade ores are mined. Once it began, however, the fate of the mine was effectively sealed.

At present it is anticipated that the final closure process will begin in 1994, when mining and milling rates will start to drop from current levels of about 2.2 million tonnes per year to about 1.1 million, by 1997. Cominco reported that ore reserves were about 22 million tonnes at the end of 1988, which would support mining until 2002. However, fixed costs at the Sullivan mine are high, and will likely mean that it is uneconomic to recover all the reserves unless lead and zinc prices remain very high. As a result, we have chosen to indicate that the Sullivan mine will close permanently before the year 2000. Employment will drop from the present 840 to 500 by 1997, and fall to zero by 2000.

The southeast coal mines in comparison are relatively youthful. Westar's *Balmer Mine* started production in 1969, Esso Resources' *Byron Creek Mine* first produced in 1972, as did Fording Coal's *Fording River Mine*. Each of these mines had reserves at startup that were expected to carry them for 25 years or more, or into the late 1990s. Now, although more than 15 years have passed since startup, reserves are indicated to be adequate to sustain production for 17 years or more, or to 2006 or thereabouts. About a decade has been added to the indicated mine lives, and it is not unreasonable to expect that further extension will be indicated as further work is done on the assessment of reserves.

The latecomers in the southeast coal field are Westar's *Greenhills Mine*, and Shell Canada Resources' *Line Creek Mine*, both of which started to produce in the 1982/83 year. Both mines were at that time expected to be able to operate for 20 or more years, or at least until 2002/3; current expectations are that the coal reserves will support operations to 2005 or beyond.

The effective lives of these southeast coal mines are much more likely to be determined by coal prices and operating costs than by the size of their reserve, however. While production beyond 2000 is indicated in Table 2.1, abrupt production declines could take place at one or more mines if the operating companies are unable to resolve current financial difficulties, and/or the current upswing in coal prices is not sustained and reverses into a decline.

Region 5 Cariboo

The only major producing mine in the Cariboo region dealt with in Table 2.1 is Placer Dome's *Gibraltar Mine*. A copper/molybdenum producer, Gibraltar was expected to operate for 20 years or more when production started in 1972. The mine is sensitive to price and operating costs, but if these remain in balance roughly as they have been for the past two years, it now appears that mining would continue to 1999, or possibly 2002. It would seem prudent to anticipate a closure beginning at the end of the 1990s, as exhaustion of economic ore reserves approaches. Should metal prices decline sharply, closure could come sooner, leaving a continuing operation reduced to the heap leaching/electrolytic plant (employing 30 to 50, versus the full mining complement of 270). The heap leaching/electrolytic operation had 8 years of reserves at the end of 1988, indicating that this operation could close by 1996 if new reserves are not added.

Region 6 North Coast

Two gold producers make up the North Coast mine production in Table 2.1 -- one that has just been put into production and one that will start up in the summer of 1989. The *Johnny Mountain Mine* began production in 1988 and is expected to operate to 1995/1996. The *Silbak Premier Mine*, with a 1989 startup is expected to operate to 1999/2000. In both cases it is possible that additional ores could be proven to extend mine lives, but it is too early for any solid indication of the probabilities. It is therefore projected that both will operate beyond 1995, with closures as early as 1996 in the case of Johnny Mountain or as late as the year 2000 in the case of Silbak Premier. The closures will generally be brought on by the state of reserves, but will also be sensitive to price and operating costs.

Region 7 Nechako

A mixture of mine types is reviewed in Table 2.1 for the Nechako Region. The *Bell Mine* is a copper producer, *Endako* primarily a molybdenum mine, *Equity* is a major silver producer, the *Erickson Mine* produces gold, and asbestos is produced by the *Cassiar Mine*.

The Bell Mine is scheduled to close sometime between December 1991 and August 1992, after 20 years of production, and in line with initial indications when it was put into operation. This closure is driven by the exhaustion of ores, and an extension of mine life is not anticipated. There is some possibility of trucking the remaining 16 million tonnes of ore from the old Granisle mine, 8 miles away, to the Bell mine for milling. However, this prospect for extending the mine life by about 3 years has been discounted in this report due to the low ore grade (.44 percent copper) and the cost of trucking. Development of the nearby Morrison Lake deposit, which contains some 60 million tonnes of ore reserves, grading .4 percent copper, has also been discounted for this report.

The Endako mine had, at startup in 1965, estimated reserves for 20 to 25 years, or to about 1990. Changes in the mine plan and addition of reserves have been such that it is now expected to operate to 2006 or beyond. Since Endako mine is a low cost producer, with a well known ore body, these projections appear quite realistic, and certainly a closure before 2000 is regarded as highly unlikely.

The Equity silver mine which opened in 1980 anticipated at that time a 10 year or longer operating life from reserves that could be mined by open pit methods. Working of those ores is now expected to continue to 1992. In succeeding years operations could shift to underground mining, but with a very short extension of the mine's life. Employment will continue at the present level of 225 to 1992 and possibly continue at that level to 1993 if the underground reserves are developed.

The Erickson gold mine is another example where an ore body has supported mining pretty much in keeping with original expectations. It was expected to operate for 10 years when it was opened in 1979, and the mine ceased to produce in 1989 with the economically accessible reserves exhausted. The company is presently attempting to delineate additional reserves that would justify re-opening. It has not been done to date, and it may be significant that it could not be done in time to prevent the closure which has just taken place.

The reserves of the Cassiar Asbestos mine that could be mined by open pit methods have also met initial expectations. Seen as having a 30 year life when the mine was put into production in 1952, open pit mining is scheduled to terminate in 1990 - after 38 years of operation. Mining will continue for a further 10 years, however, as operations shift to underground mining of the McDame deposit. Employment is indicated as rising somewhat, from the present 300 to perhaps 350 or 400 with underground mining.

Region 8 Northeast

Two major northeast coal mines and a relatively small gold mine represent the northeast region mining in Table 2.1. The *Lawyers Gold Mine* has just started production and is expected to operate for approximately 5 years. It is possible that other orebodies nearby may be brought into production prior to exhaustion of the Lawyers' reserves, and, using the Lawyers mill, effectively extend the life of the operation beyond the 1993/94 closure date that is indicated. It is too early to indicate this as a strong probability, however, so the 1993/94 closure remains indicated in Table 2.1. The northeast coal mines, *Quintette* and *Bullmoose*, were put into production in 1983 with reserves expected to carry them for 20 years or more. Despite the considerable difficulties encountered by Quintette with its main open pit, the reserves for both mines are still seen as adequate to carry them beyond 2000, and additional exploration could well extend their horizons further.

Table 2.1 indicates production to 2000 for both mines, although there is considerable risk that this may be jeopardized by economic conditions. If the arbitration process that the Quintette mine is currently involved in results in prices paid under contract falling significantly to current short term contract levels, it is possible that the mining plan will be radically altered and the mine put on a short term (say 5 year) path to closure. It is possible that a Quintette closure would also trigger a Bullmoose closure, if the latter mine were unable to carry the transportation infrastructure in the absence of Quintette. Thus while Table 2.1 indicates production of coal in the northeast continuing beyond 2000, these projections are sensitive to near term decisions which could radically alter the future of both of these mines.

Summary of Mine Production Forecasts

Table 2.1 provides forecasts of production from a total of 25 British Columbia mines through to the year 2000. These are arbitrarily allocated to a *large* mine category in Table 2.2 if employment exceeds 200, and a *small* mine category in Table 2.3 if employment is less than 200. Tables 2.2 and 2.3 summarize employment by mine for the years 1990, 1995 and 2000.

Of the 18 large mines in Table 2.2 three -- Brenda, Bell, and Equity -- are expected to shut down by 1995. Between 1995 and 2000 the Island Copper, Similco and Sullivan mines are expected to phase out, and Cassiar will be cutting back. The turn of the century could see only 10 of the current 18 large mines sustaining production and employment at current levels. Significantly, 7 of those 10 are coal mines, presently operating in an uncertain economic environment which could see their ranks thinned by one or more during the coming decade. Other large mines may come on stream between now and 2000, offsetting the depletion forecast in Table 2.2. Such mines are generally the result of a lengthy exploration and development process, however, at least the early stages of which would have to be in progress now. Relatively few major ore deposits would fit such a categorization at present, so it has to be anticipated that the turn of the century will see a significant reduction in the number of large mines operating in British Columbia.

There are 7 small mines shown in Table 2.3. One closed early in 1989, two more will be closed by 1995, and only one of the 7 is expected to be operating in 2000. With the exception of the Afton copper mine, the "small" mines in Table 2.3 are precious metal producers, characterized by fairly short (5-10 year) life expectancies when they are put into production. While we do not anticipate that the mines currently shown in Table 2.3 will be in production in 2000, it is very likely that a different set of 7 small mines may have been brought into production, effectively replacing them.

Table 2.2
Employment in Large Mines, 1990, 1995, 2000

		1990	1995	2000
Region 1	Island Copper	560	450	0
	HW-Lynx	700	700	700
Region 3	Brenda	420	0	0
	Similco	340	340	0-340
	Highland Valley	1,310	1,360	1,310
Region 4	Sullivan	840	500	0
	Balmer	1,000	1,000	1,000
	Byron Creek	200	200	200
	Line Creek	450	450	450
	Greenhills	585	585	585
	Fording River	1,050	1,050	1,050
Region 5	Gibraltar	270	270	200
Region 7	Endako	220	220	220
	Equity	200	0	0
	Bell	250	0	0
	Cassiar	350	400	350
Region 8	Quintette (high price scenario)	1,200	1,200	1,200
	Bullmoose	360	360	360
TOTAL		10,305	9,085	7,625-7,965

Table 2.3
Employment in Small Mines, 1990, 1995, 2000

		1990	1995	2000
Region 3	Nickel Plate	190	190	0
	Afton	180	180	0
	Blackdome	140	0	0
Region 6	Silbak Premier	160	160	160
	Johnny Mountain	115	30	0
Region 7	Erickson	0	0	0
Region 8	Lawyers	140	0	0
TOTAL		925	560	160

CHAPTER THREE

ASSESSMENT OF IMPACTS ON WORKERS AND COMMUNITIES

This chapter deals first with the historical experience with selected mine closures in British Columbia and the impacts on communities and workers. It then presents analysis of the extent to which local and regional economies are dependent on selected mines which may close between the years 1990 and 2000, and examines those potential closures and their anticipated impacts.

3.1 Historical Experience with Mine Closures in B.C.

As noted in the Introduction, British Columbia has a long history of mine closures. The review here is restricted to those that can be considered "contemporary", in order to be of relevance to what is anticipated in the near future. In addition to actual closures, a brief review of "near-closures" during the 1982-1986 mining recession is added.

3.1.1 Closures

The mine closures in British Columbia that are reviewed include three copper mines -- Craigmont near the City of Merritt, Bethlehem near Ashcroft, and the Granduc/Canada Wide mine at Stewart; two molybdenum mines -- Amax at Kitsault and Boss Mountain near Williams Lake; and one copper/molybdenum mine -- Highmont at Logan Lake. Although there have been other closures, they have generally been of small mines with relatively inconsequential community impacts.

Craigmont

The Craigmont Mine, a copper mine operated by Placer Development, opened in 1960. At its peak it employed 600, and the City of Merritt was the effective local centre for housing, secondary services, and related matters. A gradual phase-out of the mine began in 1974, in anticipation of exhaustion of the orebody. This was completed in 1982, when the last 50 workers were laid off.

The closure process was reviewed in the Ministry of Municipal Affairs report for the 1982 Federal Provincial Task Force on Mining Dependent Communities (ref. #10). The main features noted were:

- lead time; closure announced 8 years in advance,
- annual meetings with employees updated closure schedule,
- severance fund established by collective bargaining,
- close communication with the community,
- a conscious effort to deflate expectations as to mine life,
- a significant effort by the mining company to assist employees with relocation and re-employment within the mining industry.

As a result, the impact of the closure is described as "not very great". Merritt is a diversified community of some 6,000 persons, strategically located so that residents have access to other mining employment in the Highland Valley, less than an hour drive away, as well as employment opportunities in forestry. Workers were absorbed into other sectors of the community's economy, were commuting to jobs at Highland Valley mines, or had relocated to other mining industry jobs outside the area.

It is reported that government assistance was neither "requested, offered, nor required" and that the adjustment program was managed by the company with the cooperation of the union through a joint committee (ref. #10).

Bethlehem

The Bethlehem Mine was an open pit copper mine near Ashcroft operating from 1962 to 1982. The Bethlehem mining operation was terminated in 1982, at which time it reportedly provided employment for 284 persons. The Bethlehem mill was re-opened in 1983 to process ore from the Valley Copper orebody, and operated at a rate of 20,000 tonnes per day. The mill employed about 400 people in 1985. This mill will be closed in 1989, when the Highland Valley Copper partnership reactivates the Highmont Mill (see below) which it is relocating nearer to the ore bodies currently being mined. Centralization of milling facilities, along with mine plan revisions, are expected to further reduce employment at the Highland Valley Copper partnership by about 100 people.

The major community effects from the Bethlehem closure were felt in Ashcroft. With closure of the Bethlehem mine there was a relocation of some residents away from Ashcroft. Census data indicate Ashcroft's peak population during 1981/82 was 2,160 to 2,190; by 1986/87 this had fallen to 1,800 to 1,900. Although modest, this fall in population led to a "softening" in the housing market, with some adverse consequences for homeowners, and also had an impact on the fiscal health of the Village of Ashcroft. The latter arose because the municipal infrastructure in the Village had been expanded in anticipation of growth, which did not materialize. The consequence was that the fixed level of services and debt had to be paid for by fewer people than originally aniticipated.

Highmont

A Highland Valley copper/molybdenum producer, the Highmont mine, near Logan Lake, opened in late 1980 with 430 employees. It closed in October of 1984 for an indefinite period because of low prices for copper and molybdenum. The original Highmont mill is currently being relocated, as part of the centralization being undertaken by the Highland Valley Copper partnership. It is scheduled to re-open in 1989, at which time it will replace the Bethlehem mill.

The impact of the Highmont closure on the "instant" community of Logan Lake which was created to serve the Highland Valley mines, has been severe. The companies operating mines adjacent to Logan Lake had provided housing assistance for employees, but restricted the location at which the assistance would be available to Logan Lake. This is felt to have caused a distortion in the pattern of settlement that might otherwise have occurred, reducing dispersion to other communities in the area, and leading to what might be described as "overbuilding" and a single industry dependency in Logan Lake. With the Highmont closure and no alternate economic activity, Logan Lake very quickly was in the position of having excess capacity in several key areas -- housing, and local commercial and government services. The excess capacity in housing has persisted, with several townhouse/condominium developments having extremely high vacancy rates.

Kitsault

The Kitsault molybdenum mine, at a remote coastal location on Alice Arm north of Prince Rupert, has been "mothballed" twice in recent history. A townsite was developed and housed employees of the B.C. Molybdenum Mine from 1967 to 1972, at which time the mine was closed. The mine was redeveloped on a larger scale, employing 450, and re-opened by Amax Mining Corporation in 1981. A precipitous decline in molybdenum prices led to the mine being closed late in 1982.

Because of its remote location the Kitsault mine had in effect operated a "company town". There had been very little non-company investment in housing stock, commercial establishments, etc., nor was there a significant local government investment in infrastructure. Accordingly when the decision to close was taken, there were relatively few repercussions beyond those borne directly by the company. Relocation and termination were negotiated directly with employees through the union, and assistance was provided by the Canada Employment and Immigration Commission through an Assessment Incentive Agreement (see Chapter 4). The costs associated with having the investment in housing sit idle/empty, and presumably greatly reduced in value from the case if the mine was operating, are borne by the company.

Boss Mountain

The Boss Mountain molybdenum mine, located some 90 km east of Williams Lake, was put into production by Noranda Mines Ltd. in 1965. The mine was closed in 1971 due to weak prices, but was re-opened in late 1973. The mine and mill were dismantled in 1983, and it is not expected that this mine will reopen. Prior to closure employment at the Boss Mountain mine had reached approximately 190 persons (ref.#10).

Because of its remote location, a townsite to house the Boss Mountain mine workers was established a short distance from the property at Hendrix Lake. It is our understanding that the housing was owned by Noranda and made available to employees on a preferred basis. Similar to Kitsault, the direct consequences of closure of the mine fell primarily on the mining company. Employees had to seek other jobs and relocate, but were not restrained in their mobility by commitments to houses in Hendrix Lake. While there would have been some spillover effects in the housing markets in 100 Mile House and Williams Lake, and also in terms of the demand for local commercial and government services, we are not aware that this was monitored and there are no indications as to the severity of such impacts.

Granduc/Canada Wide

The District of Stewart, on the northern B.C. coast at the head of the Portland Canal, has had considerable experience with mine closures. In 1978 the Granduc Mine, an underground copper mine which had been operated by Newmont Mining Corporation since 1971, was closed suddenly. The Granduc Mine was the largest employer in Stewart, and constituted 73% of the tax base (ref. #10). With the closure, the population fell from 1,400 to some 400 (650 in the MISBD 1984 report. ref. #8); the assessment base fell from $36 million in 1979 to $10 million in 1980 (ref. #10).

The stress on the community was considerable. Housing declined significantly in value, and the District's financial viability came into doubt. The major problem for the District was the high cost of servicing a fixed debt of close to $1 million. Most of this debt was incurred to finance construction of a swimming pool complex, with the necessary borrowing approved by the Province in 1974. As an interim measure the Province agreed to meet the District's long term debt obligations, and a one-year payment of close to $82,000 was made in 1979.

The economic base of the community was examined by the Province, and the financial prospects of the mine operation reviewed. Future prospects of the community were felt to be good, in terms of forest processing and port facilities, but in the near-term the community was expected to continue to be dependent on mining. Direct economic assistance to the Granduc Mine was rejected as an option.

At the end of 1979 the Granduc Mine was purchased from Newmont by Esso Resources Canada and reopened as Canada Wide Mines. That resolved, temporarily, the problems which had been created by the 1978 closure.

Stewart's problems resurfaced in 1984, however, when Esso decided to close the Canada Wide mine. In the interim, little had occurred to broaden the economic base, and the anticipated consequences of closure were as severe as they had been in 1978. The procedures dealing with the 1984 closure involved several Provincial Ministries, and are suggested as a model for such situations in future (ref. #11). The Ministry of Municipal Affairs and the Ministry of Industry and Small Business Development worked together to review the community implications of a closure, and complete a review of future development opportunities for the District of Stewart.

Population was expected to decline from the 1981 Census level of 1,450 to some 800 by the summer of 1984. A further decline was expected if there were no development prospects or additional job opportunities in the area in the following one to two years, leading to a medium-term population level of 450 to 500. The consequences for local businesses were expected to be severe, and there was a great deal of uncertainty with respect to housing -- the disposition of company-owned housing stock in the community being the key component of this uncertainty.

The long term debt remained a critical concern in the financial situation of Stewart. The situation had not changed since 1978, with the debt load still significant -- a fixed debt of $686,000, of which $499,000 was debt on the swimming pool.

The Ministry of Industry and Small Business Development provided funding for the community through the Community Organization for Economic Development Program (see Chapter 4) and assisted in seeking economic development opportunities that could sustain the population and provide alternative sources of revenue for the District. A Base Case scenario, with the Canada Wide Mine closed, other mines and mining exploration making some contribution to the community, some increase in tourism, and continuing provision of transportation and services was seen to be most likely to support a population of some 600 to 800 persons.

Stewart's fortunes have since recovered. Ministry of Forests policy has facilitated timber harvesting and exports from the decadent timber stands in the area and the British Columbia Development Corporation provided financing for a log sort and export facility, creating a significant forestry employment base in the town. Arrangements were also made for the Alaska State Ferry to call at Stewart, enhancing tourism and transportation activities. The 1989 opening of the nearby Premier Silbak Mine will re-establish mining employment.

3.1.2 Near Closures

Through the 1982 to 1986 recession, British Columbia was heavily involved, in conjunction with mines and mining communities, in efforts to prevent a number of mine closures. These were circumstances where the market downturn was so severe that a number of firms could no longer see their way clear to continue operation. despite the fact that the ore bodies had been expected to support mining for a number of years at "normal" prices. A significant matter in the concern over these "premature" closures was that once the companies had borne the costs of closing it was unlikely that the mines would re-open if and when metal prices improved.

The Critical Industries Commission was the vehicle the Province used to try to find interim solutions that would keep these mines (and other businesses) operating in hope of an eventual turnaround in their fortunes. We sketch here the bare bones of what was involved in keeping a number of mines from closing.

Similkameen Mining Co.

Just south of Princeton, copper had been mined at several pits and a mill/concentrator operated by the Newmont Mining Corporation subsidiary since 1972. The employment of 300 to 350 was significant to the Town of Princeton, accounting for some 40 to 45% of the primary labour force. Given copper prices of $0.60(US) per pound in 1986, the company indicated that the mine could not be operated beyond 1987 unless prices recovered to at least $0.65(US). Significantly the other major employer, the forest industry, was under considerable stress at the same time, so that the overall economic outlook in Princeton was unfavourable.

The concerns with a Similkameen closure at this time were obvious -- the loss of employment and the impact on private investment in homes and businesses in Princeton. (The mine itself was not on the municipal tax roll.) With the involvement of the Critical Industries Commission, an Economic Plan was approved in June of 1987 that forestalled the closure. This Economic Plan, which involved the province, BC Hydro, the mine workers union (CAIMAW), and the owners extended the expected life of the mine to approximately 1990.

Subsequent to the completion of the Critical Industries Plan, the sale of the mine to the Cassiar Mining Corporation, and change of the name to Similco Mines Ltd., was announced in June 1988. One of the conditions of sale was an agreement with BC Hydro to extend the period for repayment of the BC Hydro power discounts made available under the Critical Industries Commission's Economic Plan. Cassiar also agreed to extend the mine life to at least 1993.

The strong increase in the price of copper since that time has put the mine on an even financial footing, and the concessions are no longer required. Although the mine faces ultimate closure near the year 2000 as reserves are exhausted (see section 3.2), the adverse consequences of a premature, and sudden, closure were successfully averted.

Brenda Mine

An open-pit copper mine, the Brenda Mine is some 22 km northwest of Peachland, in the central Okanagan Valley. Operation started in 1970, with a closure from September 1983 to May 1984, and a further closure from December 1984 to September 1985. Employment at the mine at this time was in the order of 450, and mine employees constituted a significant element in the nearby District of Peachland. Concern over the closures focussed primarily on job losses and, to a lesser extent, impacts on the District of Peachland -- house values, local commercial services and retail trade, district tax revenues, and financial status. (The Brenda Mine itself is not on the municipal tax roll.)

The reopening in 1985 was based on an agreement negotiated by the Critical Industries Commission, the key elements of which were voluntary reductions in labour, power and taxation expenses. Under the reopening plan the mine was to operate until December of 1988. The extension of the discount power agreement reached between the mine and B.C. Hydro early in that year is expected to extend the mine life to July 1990.

Bell Copper

The Bell and Granisle copper mines formerly provided the economic base for the community of Granisle, northeast of Houston in the Nechako area. The Granisle mine began operation in 1966 with initial employment of 140 -- for whom the community of Granisle was established. In 1972 milling capacity for the Granisle mine was doubled and employment rose to over 300. The Bell mine, in the same area, came on stream in 1972 and employed 370 workers by 1981, most of whom also lived in Granisle.

The Granisle mine closed in July of 1982; and in October of that year the Bell mine closed. In September of 1985 the Bell mine reopened, providing employment for

250 workers, following implementation of an Economic Plan worked out by the Critical Industries Commission. At that time it was expected that the mine would continue to operate to 1989. With recent high copper prices and high productivity in the mine, operations are now expected to continue to 1992.

The concerns that led to the Critical Industries Commission involvement with the Bell Mine were community-specific to the extent that it was felt to be worthwhile to extend the life of Granisle rather than abandon the private and public investment in housing and infrastructure, and of a "macro-economic" nature insofar as the British Columbia economy continued to suffer from recession in 1985 and opportunities to create or renew employment were pursued throughout the province. The community effects alone are not extensive, and it is not clear that in themselves they would warrant extensive government action in the future (see Section 3.3).

Cassiar Asbestos

The Cassiar Mine is a remote asbestos mine in the northwest of the Province, some 140 km south of Watson Lake, which has been operated by the Cassiar Mining Corporation since 1953. Open pit reserves were expected to be exhausted in 1991 with the mine closing at that time and some 500 jobs lost. The Critical Industries Commission was approached regarding long term assistance. However, as the Commission was generally responsible for dealing with short term, cyclical problems, a long term Economic Plan could not be developed. Instead, a short term plan involving property tax reduction was put in place in 1987, while the company continued to discuss its options for the longer term with the government. The company subsequently decided in 1988 to mine the McDame underground deposit, adjacent to and beneath the existing open pit, with a minimum projected life of 8 years. To facilitate this the provincial government has provided a loan of $25 million (total development cost of $50 million) to the company.

The concerns leading to the agreement between the company and the province were primarily that closure of the mine would mean abandonment of the town. The town is basically a company town and there would have been relatively little writedown of investment in private housing. The consequences for government infrastructure in the conventional sense were also minor. The town does, however, provide a focal point for other activities in the area, including the nearby Erickson gold mine operation and exploration and prospecting activity. Abandonment of the town would have left a void with respect to these other functions, and it is believed that concern over this led to the goverment decision to support the company in its move to develop the McDame deposit and extend the life of the mine.

Endako

The Endako molybdenum mine, near Fraser Lake east of Prince George, started production in 1965. Following the decline in molybdenum prices it closed in 1982. The Critical Industries Commission was approached for assistance, but a prolonged strike-lockout situation at the mine made a voluntary Economic Plan involving the company and the union difficult to achieve. Under an agreement reached with the remaining employees who decided to decertify from their union, the mine re-opened in mid-1986, at approximately one-third of its original level. This rationalization has allowed Endako to establish itself as a very low cost molybdenum producer, and output has returned to almost 100 percent of original design level.

Closure of the Endako mine and loss of over 200 jobs, coinciding as it did with the downturn in the forest industry, had been devastating to Fraser Lake. The mine is on the municipal tax roll, and during its closure from 1982 to 1985 there was a serious disruption of municipal finances. The re-establishment of the mine has contributed again to the community economic base, as well as stimulating employment generally. The Endako mine is now expected to operate for 20 years or more.

3.1.3 Synthesis of Experience with Closures and Near Closures

Recent experience with mine closures and near-closures provides some valuable insights as to the conditions that may give rise to serious problems in future closures. These can be portrayed as a continuum from one extreme where a mine is remote and operates a "company town" to a middle ground where a mine is a substantial force in a community, but independent parties have made significant commitments based on expectations regarding mine performance, to the other extreme where a mine operates in a diversified economy with capacity to absorb resources "freed up" by mine closure.

Remote mine/company town

Typical of this situation are the Kitsault and Boss Mountain molybdenum mines. The company's investment in fixed assets is not restricted to the mine and mill/concentrator, but extends to local housing and commercial/retail structures. In deciding to close, the company bears the consequences of loss in value in these assets, as well as the direct mine assets. Workers are not tied by investment in housing, nor are workers/entrepreneurs in the service sector tied by their investments. Assistance with job mobility is generally available so that, subject to the prevailing economic conditions at the time, closure does not create serious hardships for mine employees.

The general experience has been that local/regional governments have little invested in fixed infrastructure in these cases, and their losses from closure tend to be small. The key to this extreme then, is that the company making the investment in the mine is also responsible for the associated "community" investment and bears any costs/losses in that sphere resulting from closure.

Middle ground, mine significant, independent commitments

Stewart, Logan Lake, Princeton and Fraser Lake are examples of situations that fall in the middle of the spectrum. The mine is a significant factor, perhaps the single most important factor, in the community. But other parties have made independent decisions to invest -- housing, commercial, public/government -- on the basis of implicit understandings or expectations regarding mine life. A closure that occurs before expected, with a consequent serious decline in the demand for local goods and services, will leave a substantial pool of investment which is in effect only partly amortized, and the owners will be faced with the prospect of an almost immediate writedown/loss of that investment. The mining company does not take full account of these "other party" costs in reviewing the economics of closure versus continued operation, and experience has shown that these other parties are generally ill prepared to cope with the consequences of closure. Government assistance is sought, but aside from ad hoc responses, as in Stewart or the "special circumstances" existence of the Critical Industries Commission, there is generally a limited range of remedies available.

Diversified economy, resources absorbed

The Craigmont mine closure at Merritt, and the expected closure at Brenda (see Section 3.3) occupy the other end of the spectrum. Expectations regarding mine employment and operating life are realistic, and an effort is made to have "other party" investment in balance. Subject to general economic conditions not being in recession at the time of closure, the resources formerly committed to the mining activity, or to services for those involved, are in effect "freed up" and available for alternate employment and applications. There is much less public or private stress and few calls for government action outside of the services normally provided to assist with adjustments within the economy.

3.2 Analysis of Community Dependence on Selected Mines

Chapter 2 indicates that throughout the province there are many mines that may cease production before the end of the century. We attempt in this section to trace the employment currently supported by most of the major mines, their significance for specific dependent communities, and their general regional setting.

The main vehicle to convey this information is Table 3.1, in which data are presented by mine, on a regional basis, following the province's eight Development Regions. The table identifies the key mines, the community or communities where most workers reside, the 1981 and 1986 population and labour force for those communities, and mining industry employment.

The same data are presented for the "Area" in which the mine and principal community are located. These areas are not defined in the Table, but are shown on the maps which follow (adapted from the forthcoming Regional Index, ref. #13). These maps show the location of the major mines, and as well as the main community they show the lesser towns and villages that tend to be linked to the major centre. In the event of a significant decline, the impacts will probably extend to these lesser settlements, even if it only means that the level of social and economic services available to them is reduced.

Using the data on population, labour force and mining industry employment from the first 6 columns in Table 3.1, several calculations have been made. The first is

TABLE 3.1: ESTIMATES OF LABOUR FORCE AND POPULATION DEPENDENCY FOR MINING INDUSTRY COMMUNITIES AND SURROUNDING AREAS

MINE BY REGION	COMMUNITY(S) OF WORKERS RESIDENCE	POPULATION		LAB. FORCE		MINING INDUSTRY EMPLOY.		RATIO POP./LAB. FORCE		RATIO LAB. FORCE/BASIC EMPLOY.		POP. AND LAB. FORCE DEPENDENCY		1988 POPULATION	1988 MINE EMPLOYMENT
		1981	1986	1981	1986	1981	1986	1981	1986	1981	1986	1981	1986		
REGION I VANCOUVER ISLAND/COAST															
Island Copper Mines	Port Hardy	5,075	5,389	2,830	3,120	915	710	1.79	1.73	2.09	2.11	68%	48%	4,945	547
	Area	12,370	12,345	6,485	6,525	955	735	1.91	1.89	1.98	2.08	29%	23%	N/A	
Lynx & Myra (H-W) Mines	Campbell River	15,832	16,986	7,985	8,685	215	370	1.98	1.96	2.40	2.45	7%	10%	18,043	668
	Area	30,600	30,545	15,435	15,180	345	520	1.98	2.01	2.20	2.40	5%	8%	N/A	
REGION III THOMPSON/OKANAGAN															
Similco Mines	Princeton	3,051	2,910	1,495	1,475	240	315	2,04	1,97	1.93	1.97	31%	42%	2,702	339
	Area	4,740	4,630	2,325	2,300	320	400	2.04	2.01	1.94	2.00	27%	35%	N/A	
Brenda Mines	Peachland	2,865	2,988	1,190	1,210	135	105	2.41	2.47	2.23	2.60	25%	23%	3,019	420
	Area	18,020	19,250	7,975	8,430	310	290	2.26	2.28	2.80	2.94	12%	10%	N/A	
Nickel Plate	Penticton														
	Area	37,525	38,945	16,825	16,756	230	190	2.23	2.30	2.45	2.50	3%	3%	N/A	195
Afton Mines	Kamloops	64,048	61,773	32,495	32,005	950	855	1.97	1.93	2.94	2.95	9%	8%	61,967	181
Highland Valley Mines	Logan Lake	2,637	2,001	1,155	975	720	570	2.28	2.05	1.51	1.60	94%	94%	1,810	1,396
	Area	75,540	71,460	37,660	35,115	1,750	1,500	2.01	2.04	2.80	2.88	13%	12%	N/A	
	Merritt	6,110	6,180	2,665	2,905	365	135	2.29	2.13	2.04	2.34	28%	11%	6,091	
	Area	9,775	9,635	4,140	4,280	580	205	2.36	2.25	1.95	2.38	27%	11%	N/A	
	Ashcroft	2,156	1,914	1,140	820	375	225	1.89	2.33	2.22	1.90	73%	52%	1,719	
	Cache Creek	1,308	1,147	695	735	55	70	1.88	1.56	2.19	1.93	17%	18%	1,036	
Blackdome Mine	Clinton	804	754	355	400	5	0	2.26	1.89	2.29	2.02	3%	0%	731	140
	Area	8,040	7,175	3,575	3,430	480	350	2.25	2.09	2.03	1.93	27%	20%	N/A	

continued

TABLE 3.1: ESTIMATES OF LABOUR FORCE AND POPULATION DEPENDENCY FOR MINING INDUSTRY COMMUNITIES AND SURROUNDING AREAS continued

MINE BY REGION	COMMUNITY(S) OF WORKERS RESIDENCE	POPULATION		LAB. FORCE		MINING INDUSTRY EMPLOY.		RATIO POP. / LAB. FORCE		RATIO LAB. FORCE / BASIC EMPLOY.		POP. AND LAB. FORCE DEPENDENCY		1988 POPULATION	1988 MINE EMPLOYMENT
		1981	1986	1981	1986	1981	1986	1981	1986	1981	1986	1981	1986		
REGION IV KOOTENAY															
Balmer Mine	Fernie	5,444	5,188	2,575	2,550	570	770	2.11	2.03	2.20	1.93	49%	58%	4,727	1,182
Byron Creek Mine	Sparwood	4,157	4,540	1,910	2,210	870	1,005	2.18	2.05	1.85	1.92	84%	87%	3,863	197
Line Creek Mine															446
Fording River Mine	Elkford	3,126	3,187	1,695	1,525	1,240	945	1.84	2.09	1.37	1.58	100%	98%	2,908	1,050
Greenhills Mine															586
	Area	16,780	16,750	8,070	7,885	2,875	3,045	2.08	2.12	1.98	1.98	71%	77%	N/A	N/A
Sullivan Mine	Kimberley	7,375	6,732	3,315	3,040	1,075	645	2.22	2.21	1.99	2.15	65%	46%	6,181	860
	Cranbrook	15,915	15,893	8,100	7,920	240	180	1.97	2.01	2.79	2.75	8%	6%	15,175	
	Area	30,330	29,800	14,670	14,320	1,520	1,025	2.07	2.08	2.59	2.70	27%	19%	N/A	
REGION V CARIBOO															
Gibraltar Mine	Williams Lake	8,362	10,280	4,295	5,385	235	205	1.95	1.91	2.38	2.46	13%	7%	10,415	271
	Area	36,280	36,255	16,775	17,200	760	450	2.16	2.11	2.37	2.43	11%	6%	N/A	
REGION VI NORTH COAST															
Silbak-Premier[1]	Stewart	1,456	858	795	403	390	27[2]	1.83	2.12	1.64	2.00	83%	12%	1,044	160[1]
	Area	4,255	3,340	1,775	1,270	655	75[3]	2.40	2.63	1.57	2.20	58%	13%	N/A	

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[1] Assumes 2nd Quarter 1989 startup

[2] Assuming the Silbak Premier Mine is still operating in 1991 during the next census, this number will rise by 157 persons to about 182; the labour force could increase by (1.64 + 2.00)/2 x 157 = 286; the population could increase by (1.83 + 2.12)/2 x 286 = 560; and the new labour force and population dependency would be about 48%.

[3] The Area numbers would go up by 157 mining employees, 286 labour force, and 560 population. The Johnny Mountain mining employees would be counted as Terrace or Vancouver residents and would not affect the Area mining employment totals

... continued

TABLE 3.1: ESTIMATES OF LABOUR FORCE AND POPULATION DEPENDENCY FOR MINING INDUSTRY COMMUNITIES AND SURROUNDING AREAS continued

MINE BY REGION	COMMUNITY(S) OF WORKERS RESIDENCE	POPULATION 1981	POPULATION 1986	LAB. FORCE 1981	LAB. FORCE 1986	MINING INDUSTRY EMPLOY. 1981	MINING INDUSTRY EMPLOY. 1986	RATIO POP. / LAB. FORCE 1981	RATIO POP. / LAB. FORCE 1986	RATIO LAB. FORCE / BASIC EMPLOY. 1981	RATIO LAB. FORCE / BASIC EMPLOY. 1986	POP. AND LAB. FORCE DEPENDENCY 1981	POP. AND LAB. FORCE DEPENDENCY 1986	1988 POPULATION	1988 MINE EMPLOYMENT
Johnny Mountain[1]	Terrace Vancouver	Workforce commuting from two locations to camp at mine site													115
REGION VII NECHAKO (SOUTH)															
Endako Mine	Fraser Lake	1,543	1,182	740	620	395	120	2.08	1.91	1.50	1.82	80%	35%	1,249	142
	Area	15,680	14,995	6,845	6,255	680	190	2.29	2.40	2.03	2.17	20%	7%	N/A	
Equity Mine	Houston	3,921	3,905	1,950	1,970	260	225	2.01	1.98	1.76	1.78	24%	20%	3,697	227
	Smithers	4,570	4,713	2,365	2,490	15	30	1.93	1.89	2.47	2.59	2%	3%	4,778	
Bell Mine	Granisle	1,430	646	740	370	545	230	1.93	1.75	1.31	1.56	96%	97%	668	254
	Area	16,450	15,985	8,040	7,880	885	585	2.05	2.03	2.29	2.36	25%	14%	N/A	
REGION VII NECHAKO (NORTH)															
Cassiar Mine	Cassiar	1,055	921	600	525	380	320	1.76	1.75	1.47	1.60	93%	97%	N/A	284
Erickson Mine	Area	1,960	2,090	985	1,085	440	400	1.99	1.93	1.86	1.94	83%	72%	N/A	107[2]
REGION VIII NORTHEAST															
Quintette Mine	Tumbler Ridge	nil	4,387	nil	2,300	nil	1,455	nil	1.91	nil	1.52	nil	96%	4,007	1,363

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[1] The Johnny Mountain mine started up in the 4th Quarter of 1988.

[2] Erickson mine shut down temporarily in February 1989.

continued

TABLE 3.1: ESTIMATES OF LABOUR FORCE AND POPULATION DEPENDENCY FOR MINING INDUSTRY COMMUNITIES AND SURROUNDING AREAS continued

MINE BY REGION	COMMUNITY(S) OF WORKERS RESIDENCE	POPULATION 1981	POPULATION 1986	LAB. FORCE 1981	LAB. FORCE 1986	MINING INDUSTRY EMPLOY. 1981	MINING INDUSTRY EMPLOY. 1986	RATIO POP./LAB. FORCE 1981	RATIO POP./LAB. FORCE 1986	RATIO LAB. FORCE/BASIC EMPLOY. 1981	RATIO LAB. FORCE/BASIC EMPLOY. 1986	POP. AND LAB. FORCE DEPENDENCY 1981	POP. AND LAB. FORCE DEPENDENCY 1986	1988 POPULATION	1988 MINE EMPLOYMENT
Bullmoose Mine	Chetwynd	2,553	2,774	1,215	1,495	25	180	2.10	1.86	2.20	1.98	5%	24%	2,654	
	Dawson Creek	11,373	10,544	5,760	5,380	150	195	1.97	1.96	2.79	2.62	7%	9%	10,144	
	Area	23,430	27,210	11,430	13,595	290	2,115	2.05	2.00	2.32	2.09	6%	33%	N/A	366
Lawyers Mine	Smithers Telkwa	Workers will be commuting from these two communuities. Refer to Region VIII - Nechako (South) Equity and Bell Mines for data on Smithers and Area.													140 4th Q startup

Sources:

Population, labour force, and industry employment data by Area were derived from the Regional Index of British Columbia, 1986 and the Regional Index of British Columbia 1989 (unpublished as of April 1, 1989).

Population, labour force, and industry employment data by community were derived from the 1981 and 1986 Census of Canada computer files by the Central Statistics Bureau.

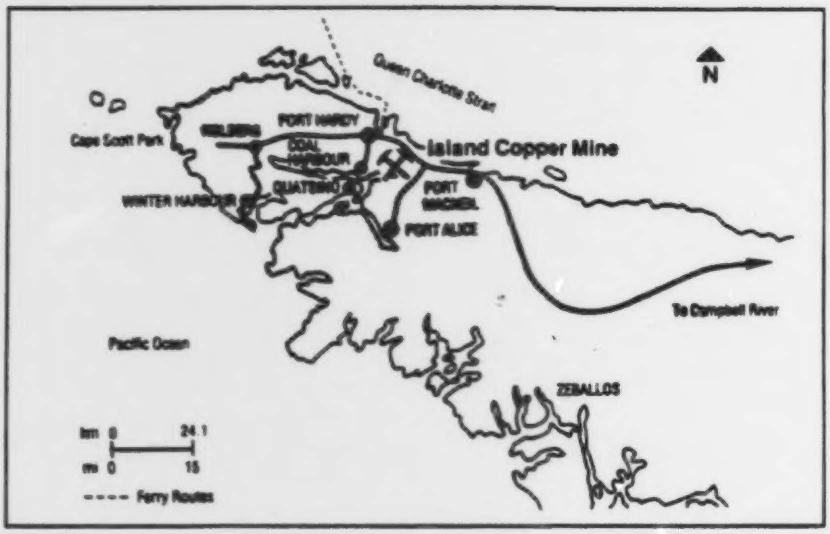
Population/labour force and labour force/basic employment ratios and the population and labour force dpendency estimates were prepared by Western Economic Consulting Ltd.

The 1988 population estimates came from the Central Statistics Bureau, Ministry of Finance and Corporate Relations.

The 1988 mine employment estimates came from the Minister of Energy, Mines and Petroleum Resources, Mining Industry Update (March 1989, unpublished edition).

REGION I – VANCOUVER ISLAND/COAST

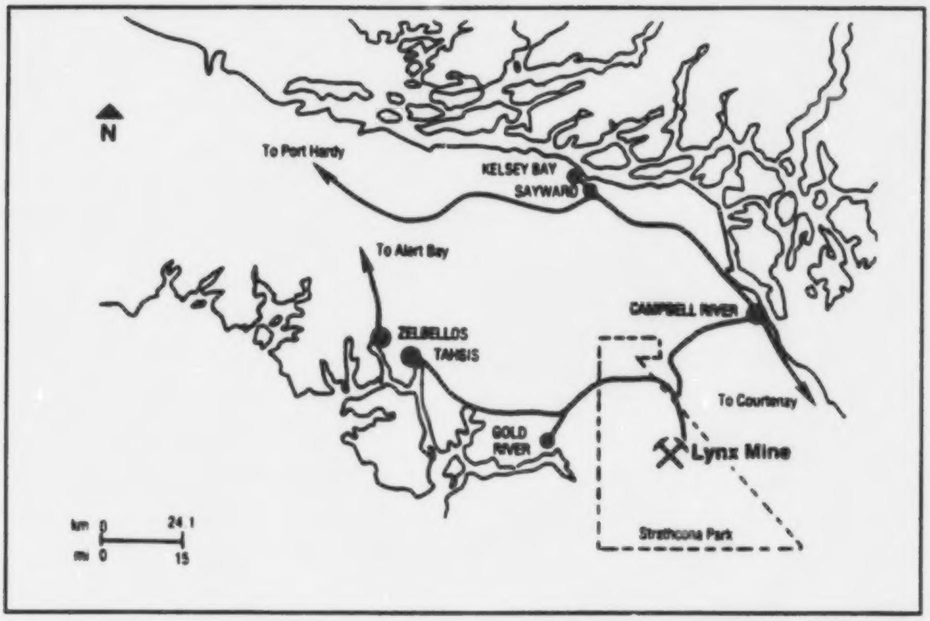
Map 3.1
Port Hardy Area


Queen Charlotte Strait
N
Cape Scott Park
HOLBERG
PORT HARDY
COAL HARBOUR
Island Copper Mine
QUATSINO
WINTER HARBOUR
PORT McNEILL
PORT ALICE
To Campbell River
Pacific Ocean
ZEBALLOS
km 0 24.1
mi 0 15
---- Ferry Routes

The Area consists of Subdivision B of the Mount Waddington Census Division (Regional District) and local municipalities with a land area of approximately 887,000 ha. It includes the District of Port Hardy (1986 population 5,389), the Village of Port Alice (1,387), the Town of Port McNeill (2,559), and the communities of Coal Harbour (201), Holberg (355), Hyde Creek (371), Mahatta River (124), and Woss Lake (469).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

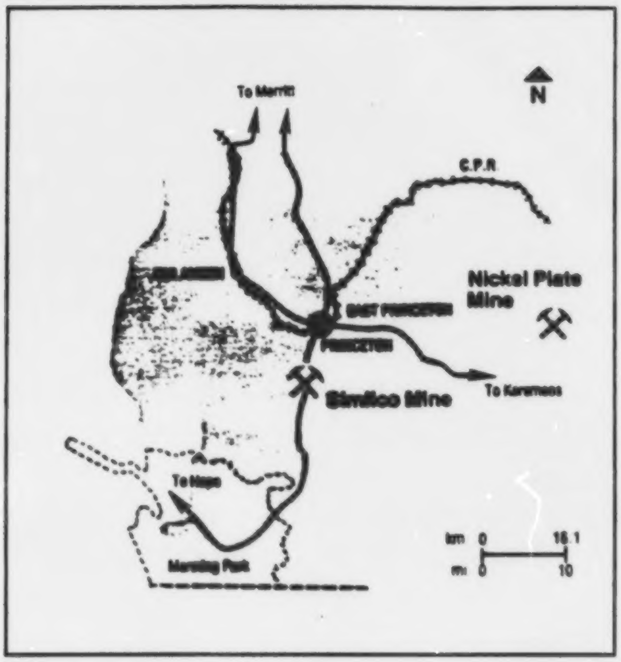
Map 3.2
Campbell River Area


N
To Port Hardy
KELSEY BAY
SAYWARD
To Alert Bay
CAMPBELL RIVER
ZELBELLOS
TAHSIS
To Courtenay
GOLD RIVER
Lynx Mine
Strathcona Park
km 0 24.1
mi 0 15

The Area consists of Subdivision B of the Comox-Strathcona Census Division (Regional District) and local municipalities with a total land area of approximately 880,000 ha. It includes the District of Campbell River (1986 population 16,986), the Villages of Gold River (1,879), Sayward (417), Tahsis (1,445), and Zeballos (195), and the communities of Oyster Bay (234), Oyster River (660), Shelter Point (536), Shelter Bay (176), and Stories Beach (1,043).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

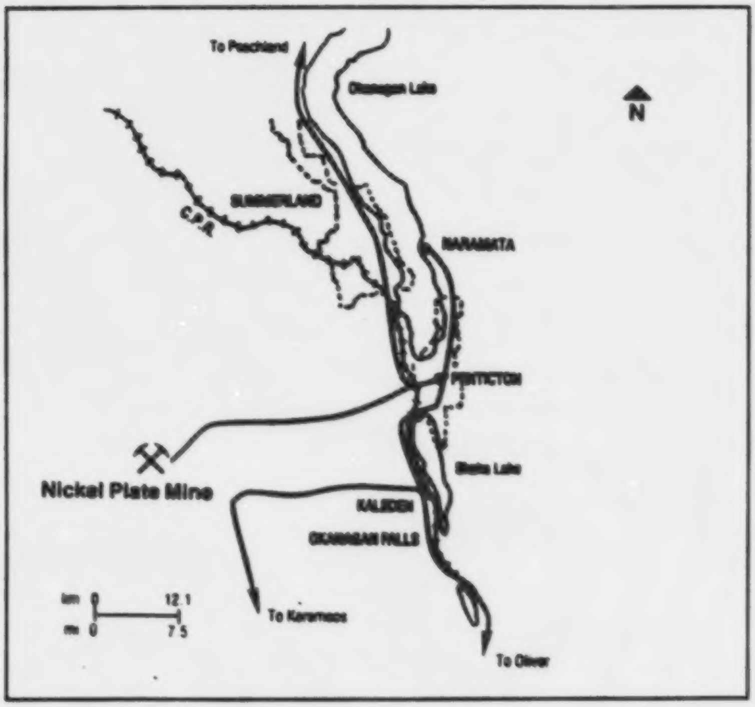
Map 3.3
Princeton Area


To Merritt
N
C.P.R
Nickel Plate Mine
EAST PRINCETON
PRINCETON
To Keremeos
Similco Mine
To Hope
Manning Park
km 0 16.1
mi 0 10

The Area consists of Subdivision C of Okanagan-Similkameen Census Division (Regional District) and local municipalities with a land area of approximately 492,250 ha. It includes the Town of Princeton (1986 population 2,910) and the communities of Coalmont (82) and Tulameen (117).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

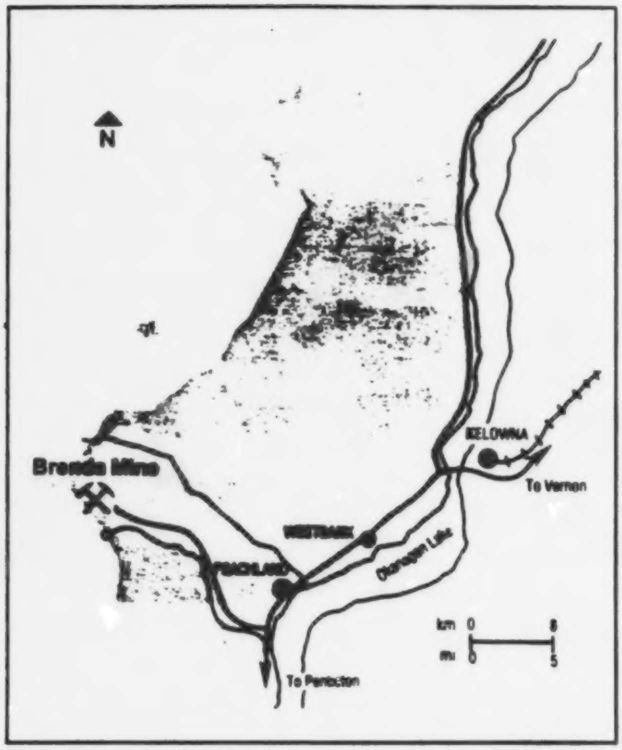
Map 3.4
Penticton Area


To Peachland
Okanagan Lake
N
SUMMERLAND
C.P.R.
NARAMATA
PENTICTON
Skaha Lake
Nickel Plate Mine
KALEDEN
OKANAGAN FALLS
km 0 12.1
mi 0 7.5
To Keremeos
To Oliver

The Area consists of Subdivision A of Okanagan-Similkameen Census Division (Regional District) and local municipalities with a total land area of approximately 225,200 ha. It includes the City of Penticton (1986 population 23,588), the District of Summerland (7,755), and the communities of Kaladen (1,000), Naramata (850), Okanagan Falls (1,101), and West Bench (821).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

Map 3.5
Peachland Area

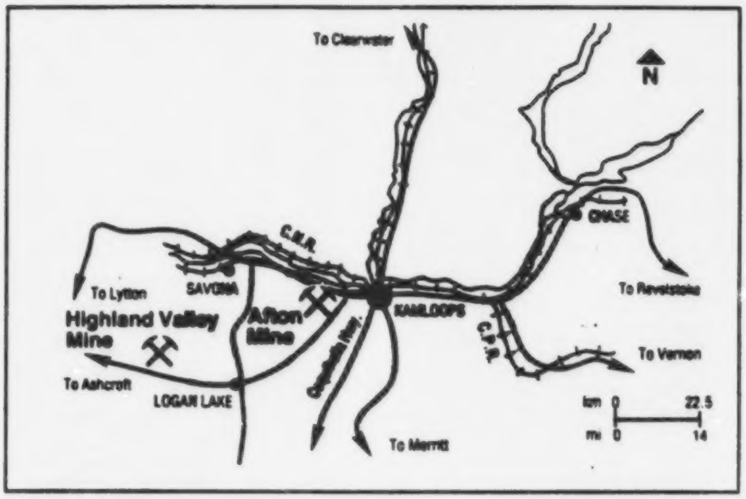

N
Brenda Mine
PEACHLAND
WESTBANK
KELOWNA
To Vernon
Okanagan Lake
To Penticton
km 0 8
mi 0 5

The Area consists of Subdivision B of Central Okanagan Census Division (Regional District) and local municipalities with a total land area of approximately 145,950 ha. It includes the District of Peachland (1986 population 2,988) and the communities of Shannon Lake Estates (571) and Westbank.

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION III - THOMPSON-OKANAGAN

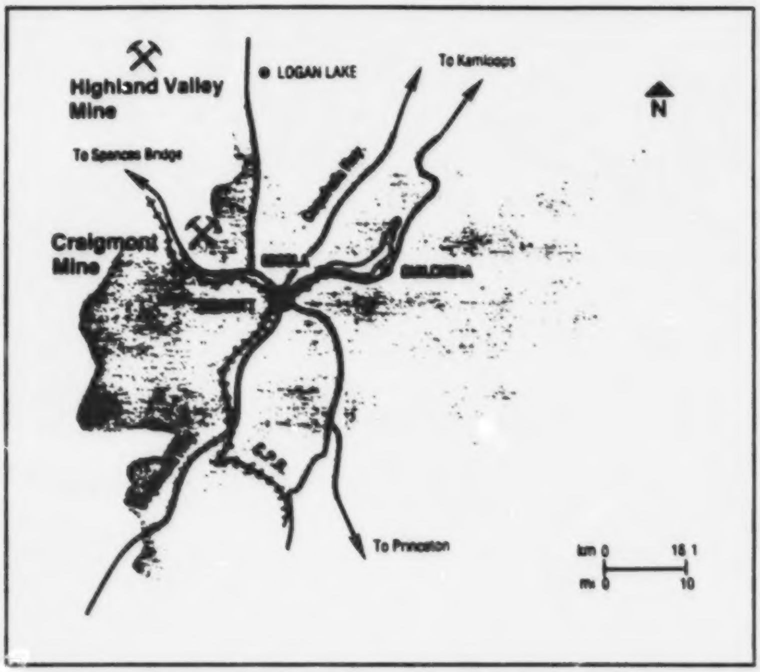
Map 3.6
Kamloops Area


To Clearwater
N
C.N.R.
CHASE
To Lytton
SAVONA
To Revelstoke
Highland Valley Mine
Afton Mine
KAMLOOPS
C.P.R.
To Vernon
To Ashcroft
LOGAN LAKE
Coquihalla Hwy.
To Merritt
km 0 22.5
mi 0 14

The Area consists of Subdivisions B and E of Thompson-Nicola Census Division (Regional District) and local municipalities with a total land area of approximately 718,200 ha. It includes the City of Kamloops (1986 population 61,773), the Village of Chase (1,933) District of Logan Lake (2,001) and the communities of Monte Creek (134), Monte Lake (66), Savona (358), Paul Lake (218), Pritchard (328), and Westwold (132).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

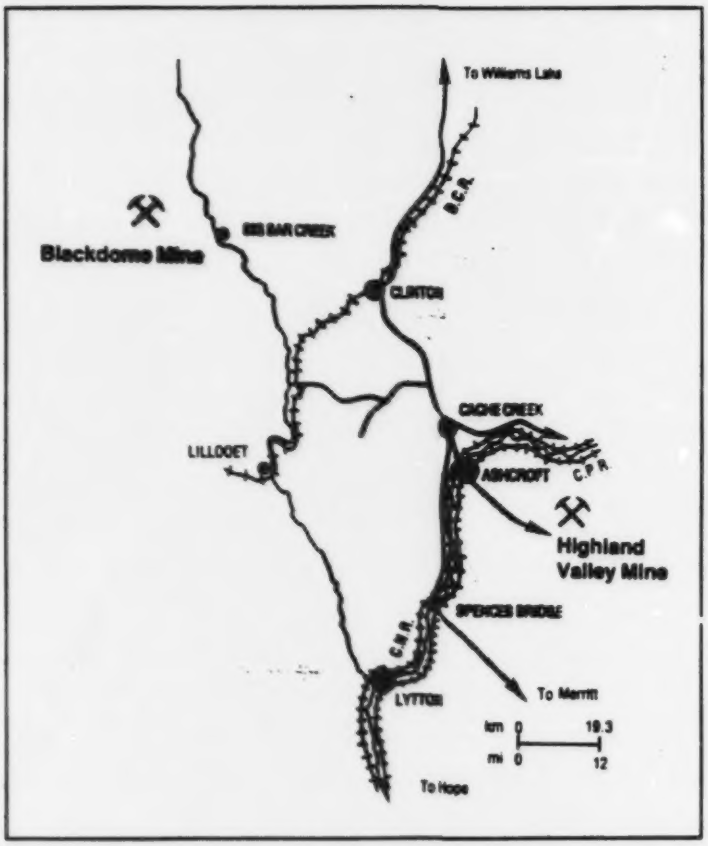
Map 3.7
Merritt Area


Highland Valley Mine
LOGAN LAKE
To Kamloops
N
To Spences Bridge
Craigmont Mine
C.P.R.
To Princeton
km 0
16.1
mi 0
10

The Area consists of Subdivision C of Thompson-Nicola Census Division (Regional District) and local municipalities with a total land area of approximately 652,200 ha. It includes the City of Merritt (1986 population 6,180) and the communities of Colletville (569), Douglas Lake (104), and Lower Nicola (1,101).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

Map 3.8
Ashcroft Area

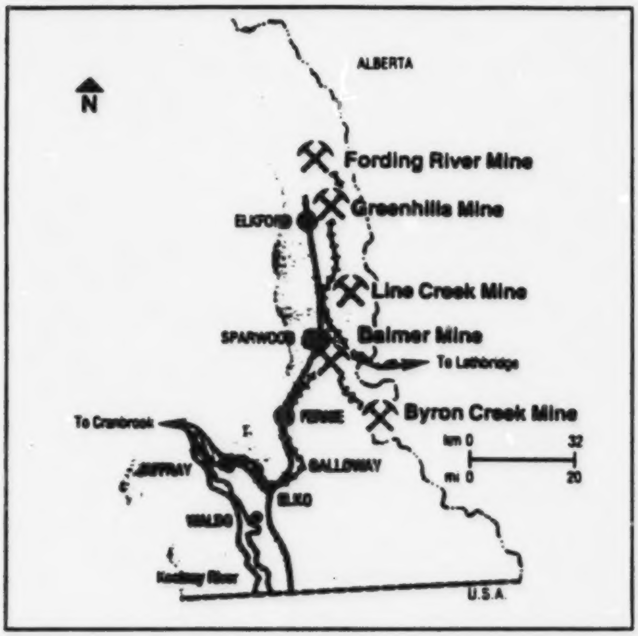

To Williams Lake
B.C.R.
Blackdome Mine
BIG BAR CREEK
CLINTON
CACHE CREEK
LILLOOET
ASHCROFT
C.P.R.
Highland Valley Mine
SPENCES BRIDGE
C.N.R.
LYTTON
To Merritt
km 0 19.3
mi 0 12
To Hope

The Area consists of Subdivision D of Thompson-Nicola Census Division (Regional District) and local municipalities with a total land area of approximately 1,296,000 ha. It includes the Village of Ashcroft (1986 population 1,914), Cache Creek (1,147), Clinton (754), and Lytton (368), and the communities of Greek Lake (121), Walhachin (73), Seventy Mile House (192), and Spences Bridge (138).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION IV – KOOTENAY

Map 3.9
Fernie Area

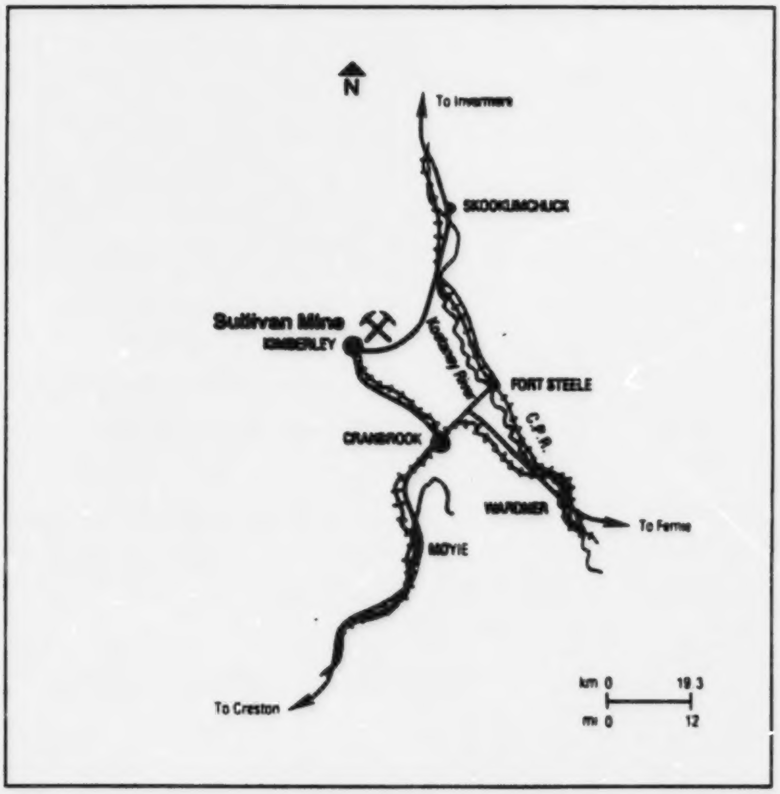

ALBERTA
N
Fording River Mine
Greenhills Mine
ELKFORD
Line Creek Mine
SPARWOOD
Balmer Mine
To Lethbridge
To Cranbrook
FERNIE
Byron Creek Mine
km 0
32
mi 0
20
JAFFRAY
GALLOWAY
ELKO
WALDO
Kootenay River
U.S.A.

The Area consists of Subdivision C of East Kootenay Census Division (Regional District) and local municipalities with a total land area of approximately 864,830 ha. It includes the City of Fernie (1986 population 5,188), the Districts of Sparwood (4,540) and Elkford (3,187), and the communities of West Fernie (475), Baynes Lake (162), Galloway (70), Elko (163), Hosmer (331), and Jaffray (376).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION IV - KOOTENAY

Map 3.10
Cranbrook-Kimberley Area

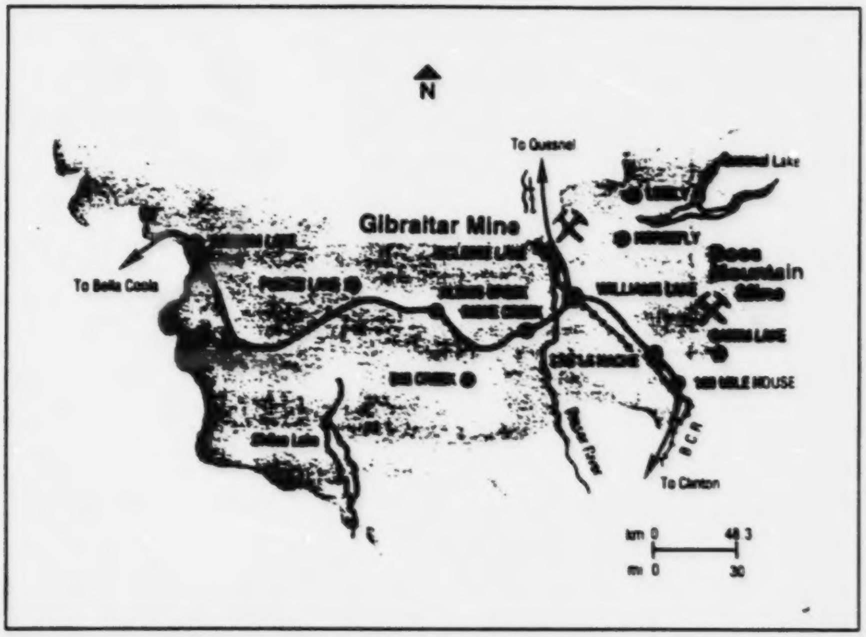

N
To Invermere
SKOOKUMCHUCK
Sullivan Mine
KIMBERLEY
Kootenay River
FORT STEELE
C.P.R.
CRANBROOK
WARDNER
To Fernie
MOYIE
To Creston
km 0
19.3
mi 0
12

The Area consists of Subdivision B of East Kootenay Census Division (Regional District) and local municipalities with a total land area of approximately 877,800 ha. It includes the City of Kimberley (1986 population 6,732), the City of Cranbrook (15,893), and the communities of Fort Steele (118), Jim Smith Lake (517), Meadowbrook (711), Slaterville (178), Ta Ta Creek (172), Bull River (189), Wasa Lake (278), Moyie (169), Wycliffe (171), and Wardner (111).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION V – CARIBOO

Map 3.11
Williams Lake Area

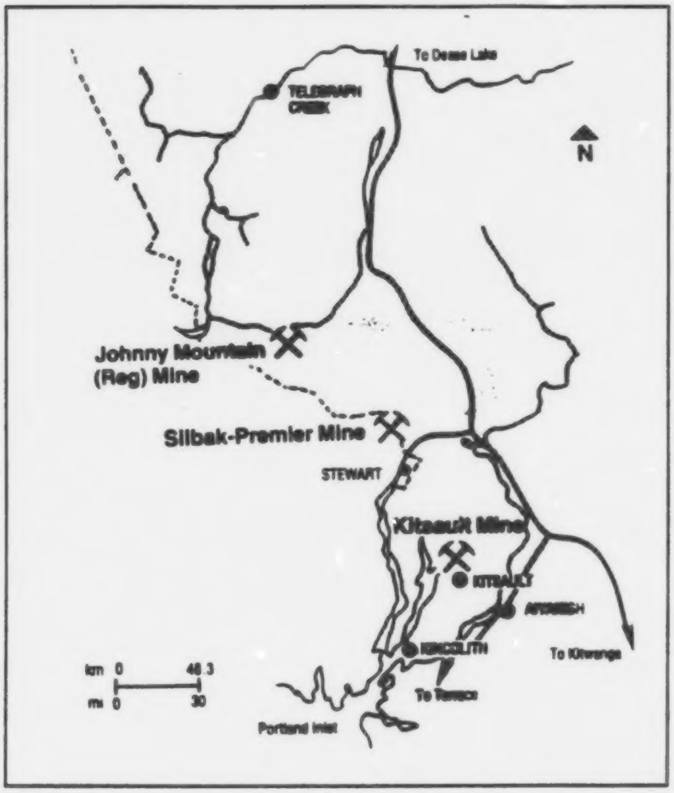

N
To Quesnel
Quesnel Lake
Gibraltar Mine
To Bella Coola
Boss Mountain Mine
WILLIAMS LAKE
100 MILE HOUSE
Fraser River
BCR
To Clinton
km 0 48.3
mi 0 30

The Area consists of Subdivisions B and C of the Cariboo Census Division (Regional District) and local municipalities with a total land area of approximately 4,673,400 ha. It includes the City of Williams Lake (1986 population 10,280), the Village of 100 Mile House (1,692), and the communities of Annahim Lake (85), Alexis Creek (164), Big Lake Ranch (233), Commodore Heights (505), Chimney Valley (211), Deka Lake (194), Dugan Lake (217), Forest Grove (266), Fox Mountain (439), Horsefly (426), Lac la Hache (741), Likely (375), Lone Butte (70), 150 Mile House (638), Mile 108 Ranch (1,511), Riske Creek (76), and South Lakeside (1,046).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VI – NORTH COAST

Map 3.12
Stewart Area

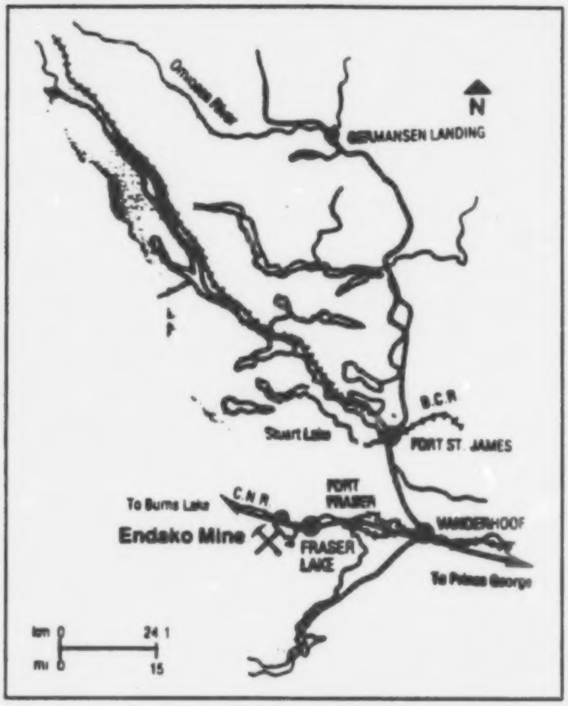

To Dease Lake
TELEGRAPH CREEK
N
Johnny Mountain (Reg) Mine
Silbak-Premier Mine
STEWART
Kitsault Mine
KITSAULT
AIYANSH
KINCOLITH
To Kitwanga
To Terrace
Portland Inlet
km 0 48.3
mi 0 30

The Area consists of Subdivision A of the Kitimat-Stikine Census Division (Regional District) and local municipalities with a total land area of approximately 6,218,700 ha. It includes the District of Stewart (1986 population 858) and the communities of Kitsault (5), Eddontenajon (13), Nass Camp (84), Telegraph Creek, and a number of Indian settlements including those at Aiyansh, Eddontenajon, Kincolith, and Telegraph Creek.

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VII – NECHAKO

Map 3.13
Vanderhoof Area

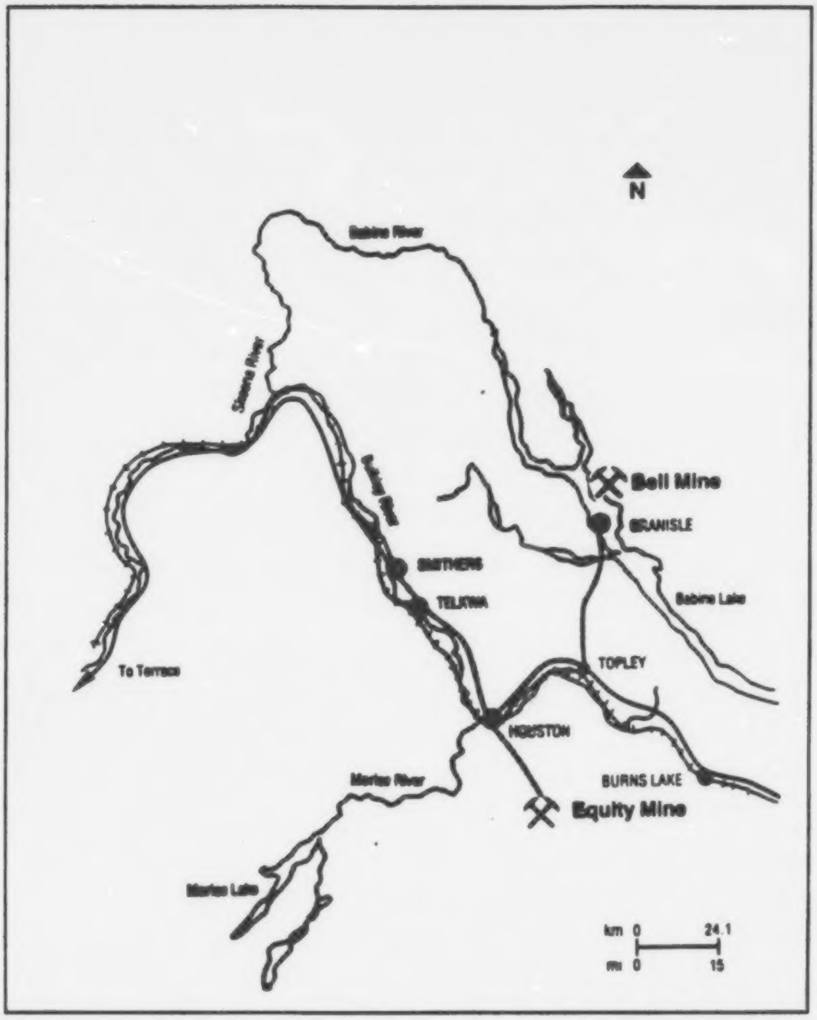

Omineca River
N
GERMANSEN LANDING
B.C.R.
Stuart Lake
FORT ST. JAMES
To Burns Lake
C.N.R.
FORT FRASER
VANDERHOOF
Endako Mine
FRASER LAKE
To Prince George
km 0
24.1
mi 0
15

The Area consists of Subdivision A of the Bulkley-Nechako Census Division (Regional District) and local municipalities with a total land area of approximately 3,209,000 ha. It includes the Villages of Fort St. James (1986 population 1,983) and Fraser Lake (1,182), the District of Vanderhoof (3,505), and the communities of Endako (99), Germansen Landing (57), and Fort Fraser (405).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VII - NECHAKO

Map 3.14
Smithers-Houston Area

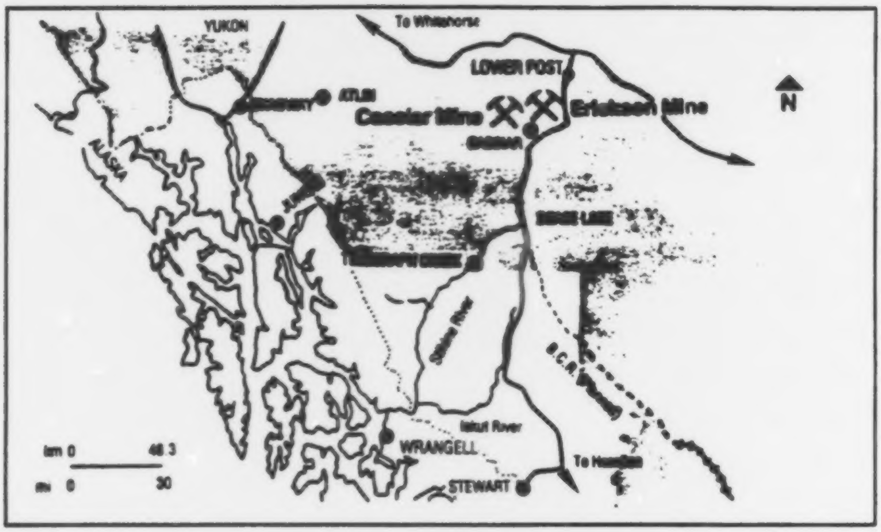

N
Babine River
Skeena River
Bulkley River
Bell Mine
GRANISLE
SMITHERS
TELKWA
Babine Lake
To Terrace
TOPLEY
HOUSTON
Morice River
BURNS LAKE
Equity Mine
Morice Lake
km 0 24.1
mi 0 15

The Area consists of Subdivision B of the Bulkley-Nechako Census Division (Regional District) and local municipalities with a total land area of approximately 1,860,000 ha. It includes the Town of Smithers (1986 population 4,713), the District of Houston (3,905), the Villages of Granisle (646) and Telkwa (863), and the communities of Driftwood Creek (406), Topley (361), Topley Landing (41), and Walcott (107).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VII - NECHAKO

Map 3.15
Stikine Area

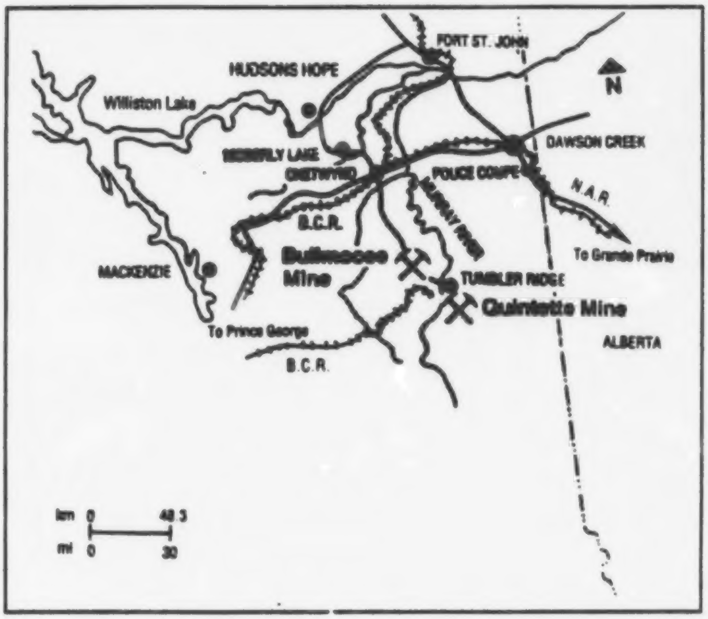

YUKON
To Whitehorse
LOWER POST
ATLIN
Cassiar Mine
Erickson Mine
N
ALASKA
Stikine River
B.C.R.
Iskut River
WRANGELL
To Hazelton
STEWART
km 0 48.3
mi 0 30

The Area consists of the Stikine Census Division, as defined for the 1986 Census, plus a small part of the Peace River-Liard Census Division that was excluded when the new Fort Nelson-Liard Regional District was incorporated in 1987. Total land area is approximately 11,618,800 ha. It includes the communities of Atlin (1986 population 506), Cassiar (921), Dease Lake (271), Good Hope Lake (89), and Lower Post (142).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VIII – NORTHEAST

Map 3.16
Dawson Creek Area

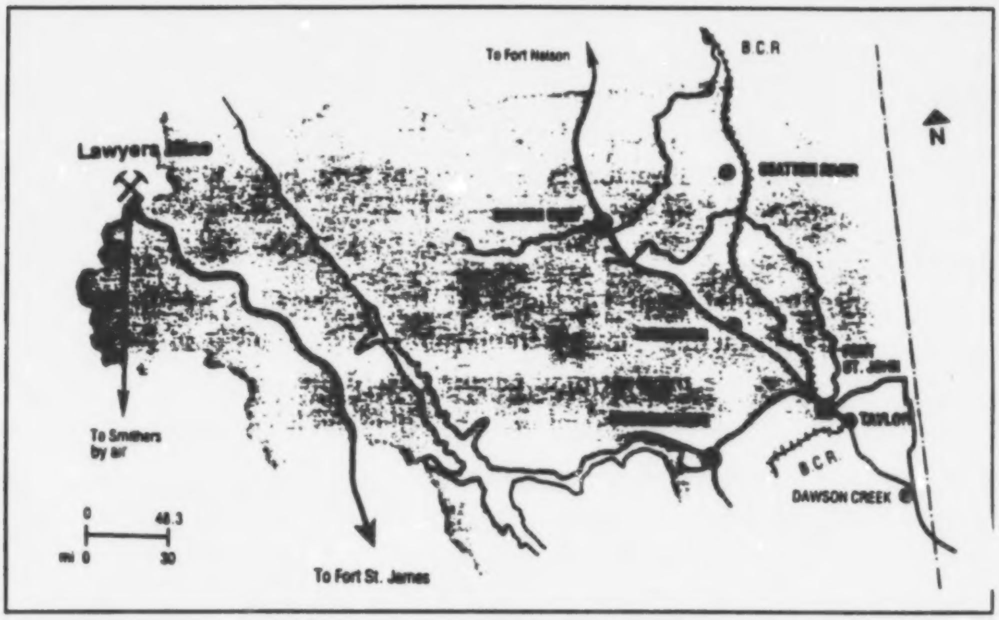

FORT ST. JOHN
HUDSONS HOPE
N
Williston Lake
MOBERLY LAKE
DAWSON CREEK
CHETWYND
POUCE COUPE
N.A.R.
B.C.R.
Bullmoose Mine
To Grande Prairie
MACKENZIE
TUMBLER RIDGE
Quintette Mine
To Prince George
ALBERTA
B.C.R.
km 0 48.3
mi 0 30

The Area consists of Subdivision C of the Peace River-Liard Census Division (Regional District) and local municipalities with a total land area of approximately 3,060,000 ha. It includes the City of Dawson Creek (1986 population 10,544), the Districts of Chetwynd (2,774) and Tumbler Ridge (4,387), The Village of Pouce Coupe (813), and the communities of Moberley Lake (265), Rolla (70), Tomslake (33), Tupper (49), and Lone Prairie (134). Subdivisions B and C now constitute the Peace River Regional District (see also Fort Nelson Area).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

REGION VIII - NORTHEAST

Map 3.17
Fort St. John Area


To Fort Nelson
B.C.R
N
Lawyers Mine
To Smithers by air
FORT ST. JOHN
TAYLOR
B.C.R.
DAWSON CREEK
0
48.3
mi 0
30
To Fort St. James

The Area consists of Subdivision B of the Peace River-Liard Census Division and local municipalities with a total land area of approximately 7,895,000 ha. It includes the City of Fort St. John (1986 population 13,355), the District of Hudson's Hope (1,158), the Village of Taylor (711), and the communities of Baldonnel (128), Charlie Lake (168), and Wonowon (129). Subdivisions B and C now constitute the Peace River Regional DIstrict (see also Fort Nelson Area).

Source: Adapted from *British Columbia Regional Index, 1988*, produced by the Ministry of Regional Development, Victoria.

simply the ratio of population to labour force. This gives a rough indication of the population structure in the area -- a ratio of about 2 is normal for most British Columbia towns and indicates a fairly balanced population. A lower ratio indicates a high proportion of single workers, a higher ratio indicates either high unemployment or a significant retired component in the community.

The second calculation is the ratio of the total labour force to basic employment. This has been developed using census data for the experienced labour force 15 years and older, by industry division (SIC 2 digit level). Each industrial sector was considered in the context of the community and regional setting, and judgment applied to estimate what proportion of employment could be considered basic (i.e., its product being exported from the region). Having estimated that, basic employment across all sectors is summed and the ratio of total to basic employment calculated. This is, in effect, a community or regional employment multiplier.

The third calculation is of the 1981 and 1986 population and labour force dependency on mining industry employment. The number of mining industry jobs is multiplied by the ratio of total labour force to basic employment to estimate the total number of jobs dependent on the mining industry, which is then expressed as a percent of total labour force. The number of jobs dependent on the mining industry, when multiplied by the population to labour force ratio and expressed as a percentage of the total population, gives a rough measure of the dependency of the population on mining.[1] In most cases, the major mine(s) in each community or area account(s) for almost all mining industry employment, and hence the dependency can be attributed primarily to the respective mine.

3.3 Possible Impacts from Mine Closures, 1990 to 1995

Chapter 2 identifies mines that may close in the next decade, and the previous section of this chapter reviews the extent to which identifiable communities are dependent on those mines. The further in the future an expected closure the greater the uncertainty surrounding its timing, as the main factors contributing to any closure decision -- the price outlook for the product and the economically accessible ore bodies -- may change in unexpected ways. The conditions in the economy generally, and the extent of diversification in surrounding communities, both of which have a bearing on the degree of difficulty encountered in coping with a closure, are also difficult to predict.

---

[1] To the extent that there are significant numbers of unemployed or retired persons who might remain in a community after a mine closure, the population dependency will be overstated.

The discussion in this Section focusses on closures that are expected in the near term between 1990 and 1995. While it is thought that the circumstances surrounding these upcoming closures can be foreseen reasonably well, changes are always possible. We note in particular that for some of the mines there still remain prospects that the proven ore reserves may be extended, allowing closure to be forestalled to a date further in the future.

Region One - Island Copper, Port Hardy

The Island Copper mine on Rupert Inlet near Port Hardy, operated by BHP Utah Ltd., opened in 1971. Current employment in the mine is about 550, most of whom live in Port Hardy, some 16 km from the minesite. Reserves, including the "Ocean zone", are expected to maintain operations until the end of 1995, after which stockpiled ore will be milled with a reduced work force of some 420 persons until the summer of 1997, at which time the mine is expected to close for good.

This closure will have a major impact on the District of Port Hardy and the surrounding area. As noted in Table 3.1, for 1986 the dependency on the mine in the District is estimated at 48%, and in the Area (see Map 3.1) at 23%. That dependency will be heightened after 1990, when employment at the Canadian Forces Station at Holberg is reduced from the present level of 234 (176 military, 58 civilian) to 14 (all military). Port Hardy is the service centre for Holberg, and the elimination of 220 jobs at Holberg will be felt directly in Port Hardy. The outlook for a further loss of 550 mining jobs in 1996/7 is a matter for very serious concern.

The prospects that alternate economic activity would fill the void left by the total loss of over 750 jobs in the local economy from 1995 to 1997 are not seen as good. It is assumed that military personnel will be assigned to other bases outside the region. Some mine employees may find alternate work and stay on in the community, but at best these will be a small minority. If they wish to continue to work in the mining industry, employees will have to relocate, and it is assumed that most will do so.

The first requirement arising out of the Island Copper closure, therefore, will be to provide for the major labour force readjustment or relocation. If the closure comes at a time when opportunities for work elsewhere are good, a program to facilitate "outplacement" of the employees should be quite successful.

A significant effect on the market for housing in Port Hardy can be anticipated. Data indicate that the housing stock is quite youthful -- in 1971 there were 495 private households in the District (255 owned and 240 rented); by 1981 this had grown to 1,660 (990 owned, 670 rented); and in 1986 it was 1,820 (1,050 owned, 770 rented) (ref. #13). Loss of almost half of the district's employment (accounting for both direct and indirect employment) will greatly reduce the demand for housing, and it can be anticipated that there will be a great deal of uncertainty as to the value of the district housing stock prior to and after a closure. Given that over two-thirds of the housing is likely to be less than twenty years old when the closure occurs, much of its value will not have been depreciated (or amortized) and those holding the housing stock could suffer significant capital losses. The extent to which mine employees are provided with company housing and would be buffered from such effects is not presently known, but it would appear that non-mine employees who have equity in housing could be significantly affected.

In a similar manner, the demand for local commercial services will fall, and the ability of local merchants (as owners or tenants) to pay for commercial buildings will fall. In the absence of a major infusion of economic activity from another source, the value of commercial properties in Port Hardy would also be expected to decline.

The loss of workforce and population and a decline in real property values (plus the loss of the mine and mill from the District's tax base) may also lead to difficulties in the District's financial position. As of 1986 the District's debenture debt for general fixed assets was only $485,000, but it also carried a debt of $4,087,000 for utilities and sewers. Servicing this debt may pose some difficulty for the remaining District taxpayers, post mine closure.

Although their tax base is broader, the school and hospital districts in the region may be affected by the closure as well. Assessment within the District of Port Hardy is roughly one-third of the total for hospital and general purposes in the entire Mount Waddington Regional District, so a significant decline could have a negative impact on regional financial capabilities. As the local or regional fiscal capability is reduced, the provincial share of funding for school and health purposes will rise.

The overall assessment of the impending closure of the Island Copper mine is that it will have a major impact on the local and regional economies. Employees may find it relatively easy to obtain ongoing work in the mining industry at other locations: for non-mine employees the situation may be more or less difficult. It seems clear, however, that there will be a major adjustment in the value of fixed housing stock and local business and commercial premises. Local and regional governments may also find their financial capabilities seriously restricted.

In terms of the spectrum of impacts identified after reviewing recent closures and near closures, the Island Copper mine would appear to fall into the *"middle ground, mine significant, independent commitments"* area -- the area where a closure has the greatest potential to create difficulties.

Region Three - Brenda, Peachland

The prior closures of the Brenda mine and its reopening in 1985 were discussed above (Section 3.1.2). It is currently expected that the mine will close in mid-1990, with the loss of some 400 to 420 jobs.

Closure of the Brenda mine is expected to involve the softest "landing" among those expected prior to 1995. Prospects for relocation of the work force are good, and Adjustment Committees have been in place for some time under the auspices of the Labour Services Branch of the CEIC. It is unlikely that employee mobility will be impaired by difficulty in selling housing. Data indicate that employees' places of residence are diversified (105 mine workers are reported to reside in the District of Peachland, 290 in the Peachland area [map 3.5] of total mine employment of 420). The impact of a mine closure on housing value will be muted by this dispersion, by the generally stable economic conditions in the central Okanagan, and the alternative demands for housing. Therefore, outplacement of mine workers from the Brenda mine is not expected to entail any significant degree of difficulty.

For similar reasons the effect of mine closure on the value of local and regional business and commercial premises is not expected to be significant. As indicated in Table 3.1, within Peachland itself the population and labour force dependency on the mine is 23%, for the slightly larger area it falls to 10%. Within the broader area of the central Okanagan, which includes Kelowna, the dependency falls even further. A "normal" rate of growth in this regional economy would, in a short period of time, more than offset the negative impacts associated by the mine closure. In addition, the impending completion of the Coquihalla Highway from Merritt to Peachland is expected to provide some local stimulus for businesses serving travellers. As a result, such adjustments as are required within the local economy are expected to be accommodated with relative ease.

Significant declines in property values and local and regional tax bases are not expected, and consequently the financial capabilties of the District of Peachland or the regional hospital and school boards should not be adversely affected.

The overall assessment of the impending Brenda mine closure is that it occupies the end of the spectrum described earlier as "*diversified economy, resources absorbed*". Government actions outside of those normally provided to assist with adjustments, in this case those available through the CEIC's Labour Services Branch, do not appear to be called for.

Region Three - Similco, Princeton

The near-closure of the Similco mine at Princeton and the conditions surrounding its current operation were dealt with above. If the outlook for copper prices remains favourable, it is anticipated that the mine will strip overburden to expose ore reserves to sustain production to 1995 or 1996. At that time, further deposits could be developed, extending production to the year 2000. Whether that is done will depend on the economic outlook in the early 1990s. We have chosen to indicate that these investments will be made and the mine will remain open until the year 2000.

The consequences of the Similco closure will be in marked contrast to the "soft landing" forecast for Brenda. As noted in Table 3.1, the economy of the Town of Princeton is heavily dependent on the Similco mine, showing a 42% population and labour force dependency in 1986 (an increase from 31% in 1981). The Princeton area (map 3.3) shows a similar high dependency of 35% for population and labour force.

While mine workers may face reasonable prospects of obtaining mine employment elsewhere, their willingness to leave Princeton will in part depend on their individual commitments to housing and the prospects for selling. In this regard it is noted that the housing stock in Princeton is somewhat mixed, with much of it being dated. Current prices are moderate, reflecting weak local demand. (The population of Princeton was 3,132 in 1976, in 1986 had declined to 2,910, and in 1987 was reported as 2,661. During the same period, private households rose from 1,035 to 1,120.)

Loss of up to 40% of the local job opportunities is bound to depress house values, as it seems unlikely that other economic activity will be found to fill the void. In this regard it is noted that completion of the Coquihalla Highway from Merritt to Peachland is expected to displace traffic that formerly travelled to the Okanagan Valley via Highway #3 through Princeton, and some loss in businesses catering to commercial and tourist travel in Princeton is expected. The balance of the Princeton economy is heavily dependent on the forest industry, and employment in that sector is expected to remain stable at best.

In the absence of a significant alternate development in the local economy, closure of the Similco mine can be expected to initiate a decline not only in housing values, but also in the demand for local business services, and ultimately the value of business and commercial premises.

Such declines as occur are not likely to lead to difficulties in the town's financial position, however. As of 1987 Princeton had only $51,000 in outstanding debenture debt for general fixed assets, and $668,000 in debt for utilities and sewers. After mine closure the tax base may be able to service this debt at reasonable tax levels. (The mine itself is not on the municipal tax rolls.) The Okanagan Similkameen Regional District, responsible for schools and hospitals, has a very broadly based tax base, including the main Okanagan valley from Summerland south to Osoyoos. Declining property assessments in Princeton are unlikely to have a noticeable effect on the financial capabilities of these regional bodies.

Our assessment of the impending closure of the Similco mine is that it will impact heavily on the town of Princeton and the immediate area. The town is likely to experience further depopulation, and declines in business activity and real property values. It would again appear to be a closure that falls into the difficult middle of the spectrum -- "*middle ground, mine significant (very), independent commitments*".

Region Three - Blackdome, Clinton

A gold and silver producer in a relatively remote location west of the Fraser River, the Blackdome mine was opened in 1986 with a six year indicated life. A closure is anticipated in 1992.

Because of its remote location, the mine, which employs 140, operates on a camp basis, with a 10-day turnaround for the workers. To recruit experienced miners for mine start up, employees were drawn from the Ashcroft area, the Kelowna/Penticton area, and the greater Vancouver area. Recent policy has been to give preference to local workers (Clinton area) in hiring, which may increase slightly the dependence of this area on mining (Table 3.1).

The Blackdome mine is acknowledged to be a short term producer, however, and with this clearly understood people have not been making long term commitments or investments on the basis of the economic activity it generates. The impact of the Blackdome closure on workers and communities is therefore expected to be negligible. On our scale, this is at the comfortable end of the spectrum -- *remote mine/company town*" -- with little disruption following from closure and minimum government action called for.

Region Seven - Bell, Granisle

The conditions leading to the re-opening of the Bell mine were discussed previously. At the time of the Critical Industries Commission initiative a major interest was job creation. In that respect the initiative has been highly successful, with the mine currently employing 254 workers, and operations expected to continue to 1992. There is some prospect that the mine life could be extended beyond 1992 if copper prices remain high, but a realistic expectation should be for a 1992 closure.

Worker housing in the Village of Granisle was primarily provided in the past by the company through individual home ownership with company buy-back agreements. However, the company recently sold off some 150 of its homes for prices ranging from $20,000 to $25,000 and many were bought by employees. With these low prices and knowledge before purchase that the mine was going to close in 1992, marketability of housing should not impair worker mobility after mine closure. Subject to conditions in the economy generally, and to application of existing CEIC programs to assist in relocation, labour mobility is not expected to be a major issue in the Bell mine closure.

The Village of Granisle is almost totally dependent on the Bell mine, however. As Table 3.1 indicates, the population and labour force dependency is some 97%; the 1981 population of the village was estimated at 1,430, with a decline to 646 indicated for 1986; the direct mine labour force is currently just over 250. There will be little reason for Granisle to exist once the mine has been closed.

Post closure economic activity in the immediate area of Granisle is expected to be minimal, and opportunities to stimulate alternate development are not good. Existing housing and commercial buildings may have some continuing value for those involved in mineral exploration, tourism, or in some facets of forestry. But for practical purposes a significant writedown in the value of buildings in the village must be contemplated. It is not clear to what extent there is non-company ownership of buildings in the village, but some of the cost of the writedown will be absorbed by the company.

The question of how to continue the Village of Granisle as an entity following mine closure would have to be addressed by the Ministry of Municipal Affairs, Recreation and Culture (MMARC). As of 1987 the village had outstanding debenture debt of $227,000 for general fixed assets. If provisions for retirement of this debt could be made it might then be most effective to rationalize the village's operations to a much smaller scale, using procedures similar to those followed in the normalization of Ocean Falls. For example, the village could be reincorporated as an improvement district or a local community under the regional district. Each of these approaches would reduce the financial responsibilities of the village while providing a basic form of self-governance.

Relatively few serious issues are expected to arise in connection with a closure at the Bell mine. Although incorporated as a village, it is for practical purposes a "company town" and costs arising from closure are likely to fall primarily on the company. There would appear to be little requirement for government action outside of established programs.

Region Seven - Equity, Houston

Equity Silver Mines Ltd. began production south of Houston (map 3.14) in 1980. It currently employs 230 workers, and is a significant force in the local economy. Open pit reserves are expected to last until 1992. The only prospect for an extended mine life is the development of deeper ore bodies by underground mining. If this is feasible, production would continue at current levels, but only for one to two years. It would seem, therefore, that a closure is to be expected at the Equity mine in 1992, with a possible one to two year extension to this date.

Impacts of a closure or a cutback will be felt most directly in the District of Houston, which is the commercial and residential focus for the mine. As noted in Table 3.1, Houston is indicated as having a 20% population and labour force dependency on the Equity mine. In addition, it is understood that Houston acts as a service centre for many of the residents of Granisle. Should the Bell mine closure occur as expected in 1992 the loss of associated economic activity would coincide with the Equity closure/reduction, and the combined impact on Houston could be more severe than the 20% dependency figure suggests.

The other major economic activity in the Houston area is forestry, and a major development in that industry that would offset the mining closures does not appear likely. Development of other, small, mines in the region generally could provide some offset to Houston, but the timing and magnitude of these is far from certain. A significant impact on Houston would seem to be impending.

An appreciation of the impact of the Equity mine on Houston can be gained from the data on population and housing stock. While the population had shown steady growth from 1976 (2,673) to 1979 (3,070) a major jump -- to 3,946 by 1982 -- coincides with the mine coming into production. A modest population decline to 3,905 in 1986 and 3,697 for 1988 is shown in Table 3.1. Private households show a similar pattern -- 750 in 1976, 1,235 in 1981, and 1,255 (of which 845 were owned, 410 rented) in 1986.

These data indicate a relatively youthful housing stock, the value of which is probably vulnerable to a major downturn in the local economy.

Although data are not readily available, it is understood that the pattern for commercial and service sector investment in Houston is similar to that shown for housing. While not exclusively attributable to the mine, a significant investment was apparently triggered by the expansion of the early 1980s. As with housing, this investment will have been only partly amortized to date, and would appear to be vulnerable to a significant downturn in local economic activity.

Local government in the District of Houston, and regional governments in the Bulkley-Nechako Regional District, will probably experience low to moderate impacts from a closure or cutback at Equity. As of 1987 the District of Houston had outstanding debt of $1,092,000 for general fixed assets and $645,000 for utilities and sewers. Servicing this debt and meeting other operating costs appear to be manageable in a post-closure local economy, although a more detailed review should be undertaken by MMARC. Regional hospital and school districts, with a broader tax base and relatively modest debt, are not expected to be placed in any difficulty as a result of the closure or cutback.

The closure of the Equity mine may give rise to some difficult adjustment issues. To the extent that the workers own their housing in Houston and values are depressed as a consequence of the closure, their willingness to relocate to other areas and continue employment in the mining industry may be reduced. In the absence of those kinds of concerns, it is anticipated that the mine workers would be reasonably mobile, and successful in finding alternate employment. The company (Placer Dome) has established a substantial severance package to encourage workers to stay until final closure, and will provide relocation assistance similar to that provided at Craigmont.

Others in the secondary labour force in Houston can be expected to face the same consequences as Equity employees in the aftermath of a closure or cutback -- lack of alternate local employment opportunities and a difficult market in which to sell housing or commercial properties prior to relocation.

While it can be expected that adjustments to the changing market conditions will eventually be made by both mine and non-mine workers, they may come at considerable cost to the individuals involved. The Equity closure or cutback would appear to be headed for the difficult middle ground in our spectrum -- "*mine significant, independent commitments*".

3.4 Possible Impacts from Mine Closures, 1996 to 2000

Forecasting closures in the second half of the coming decade, 1996 to 2000, must be seen as significantly more uncertain than those dealt with above, which are generally expected around 1992/93. The price outlook for the relevant metals and minerals, applicable mining technology and economic ore reserves, and conditions in the local and global economies are major unknowns that will have a bearing on the decision to close.

Despite this uncertainty, there are some mines for which, primarily because of ore exhaustion, closure should realistically be anticipated in this period. Five such mines, selected on the basis of the size of labor force and community impacts, are reviewed here. It can be expected that other mines may open and close between now and the year 2000, but these will almost certainly be small operations and the impacts associated with them are unlikely to warrant special consideration or intervention.

Region Three - Nickel Plate, Penticton

An open pit gold mine, located above the old mining town of Hedley in the Similkameen valley, the Nickel Plate mine is some 35 km west of Penticton, and 30 km east of Princeton. Opened in the spring of 1987, it was at that time expected to have a 10 year operating life. Recent re-assessment of the geology of the ore deposits suggests that the mine may not operate for the full 10 years, and a closure should be expected in the 1996/97 time period at latest.

The mine currently employs 190, with a recent announcement that there will be an addition to the work force. There has been very little community development directly associated with the mine. Employees have been drawn from the Penticton/Keremeos area, from Hedley, and from Princeton. Table 3 indicates the main community of worker residence is Penticton, and shows a very low population and labour force dependency of 3%.

Because of this low dependency in the major area of residence, and the dispersion of workers in the general area, impacts of a Nickel Plate mine closure on housing, business and commercial properties, and local and regional government financial capabilities are not expected to be detectable. Worker mobility may be a concern, but it is difficult to assess that far in the future. Many of those working at Nickel Plate were recruited from within the region, and may prefer to remain there after closure. Other mining opportunities may develop, as exploration in the general area is active, or other forms of employment may be sought.

In general terms the Nickel Plate closure should constitute a fairly "soft landing", not unlike that forecast for Brenda in the more immediate future. Requirements for government intervention will probably be minimal.

Region Three - Afton, Kamloops

A copper producer at the northern extremity of the Highland Valley, the Afton mine and mill is located west of Kamloops approximately 25 km. Initially opened in 1978, the original Afton operation included an open pit mine, mill and smelter. The entire operation closed in 1982, and the mine and mill were reopened in 1983 with federal and provincial assistance.

In 1987 the original high grade open pit ore was exhausted and mining shifted to a lower grade "Pothook" open pit, which in turn was exhausted in mid-1988. Milling of stockpiled ore will carry the operation to mid-1989. Continuation of activity beyond mid 1989 will be supported by development of the nearby Ajax ore deposit, for which the Ministry of Energy Mines and Petroleum Resources recently granted Approval in Principle. Ore is to be trucked from the Ajax pit to the Afton mill, a distance of 10 km. At the Afton milling rate the Ajax ore will last 8 years, to 1996/97. Employment at Afton is presently 180, and is expected to be maintained at that level until 1996/97 when the ore reserves in the Ajax pit will be exhausted.

Problems with an eventual closure may not be significant. The City of Kamloops presently shows (Table 3.1) an 8% labour force and population dependency on mining, and the Afton mine accounts for only about one-fifth of the mining industry employment. For the general Kamloops area (Map 3.6) mining industry dependence is higher, at 12%, but only about 12% of the mining industry employment in this area is accounted for by Afton.

If the present structure of the local economy persists through to 1996/97 then an Afton closure would likely be characterized as falling within the comfortable range of the spectrum we have suggested -- *"diversified economy, resources absorbed"*. Whether difficulty arises in making adjustments, and the extent of impacts on housing and the value of other improvements will depend on the general economic climate at the time of closure. There is nothing inherent in the relationship between Afton and the balance of the regional economy (i.e., no critical dependencies) that would suggest the impacts will be serious, given reasonably stable prevailing economic conditions at the time of closure.

Region Four - Sullivan, Kimberley

The East Kootenay city of Kimberley has depended for many decades on the operations of Cominco Ltd. which are based on the Sullivan mine. This mine first produced in 1899, and has been in continuous production since 1922. The lead and zinc concentrates produced are shipped to Cominco's smelter at Trail. During the 1960s pig iron was manufactured and a steel plant operated briefly, but these operations ceased in 1972. The fertilizer plant, which had operated for 34 years, closed in 1987, with the loss of 140 jobs. Employment in the mine declined at about the same time, to some 860 at the end of the year.

After modest increases through the 1970s (from 1,311 in 1971 to 1,536 in 1980) total Cominco employment in Kimberley has declined steadily in the 1980s. Employment for the ten years 1979 to 1988 has been:

1978	1,389
1979	1,475
1980	1,536
1981	1,519
1982	1,382
1983	1,338
1984	1,307
1985	1,128
1986	885
1987	867
1988	860

Reserves of the Sullivan mine are sufficient for it to maintain production at the 1987 level until approximately 1993, with production expected to tail off thereafter -

leading to a final closure before the year 2000. A graph showing the *maximum* manpower requirements from 1989 to 1997 has been prepared by Cominco for discussions with employees, local, provincial, and federal governments. The graph is reproduced in this report as Figure 3.1.

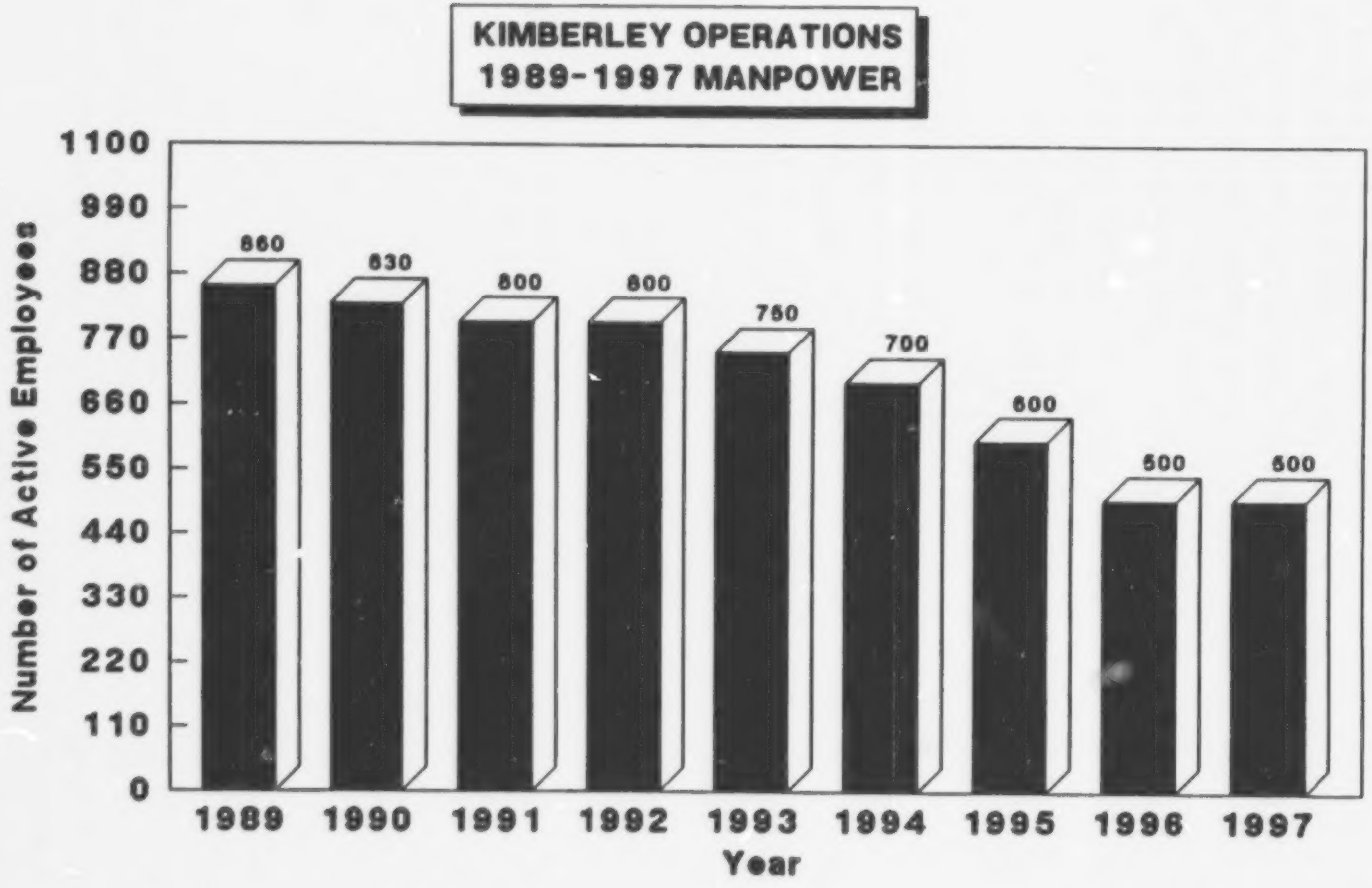
Kimberley's population has already displayed a response to Cominco employment. The 1976 census population was reported as 7,111; 1981 showed a small increase to 7,375. In 1986 it had declined to 6,732, and for 1988 the estimate is 6,181.

When the number of remaining mining areas (faces) within the Sullivan mine becomes considerably reduced in 1992, the process of decline will enter another significant phase. As Table 3.1 shows, Kimberley's population and labour force dependency on the Sullivan mine is just short of 50% (having declined from 65% in 1981). Prospects for alternate economic activity in the area are modest. Ongoing mineral exploration in the area may lead to properties that are developed in the future, but no specific prospects have been identified to date. At the time of the fertilizer plant closure in 1987, the Ministry of Economic Development (as it then was) examined the potential for development at Kimberley, but was unable to foresee a development scenario that would offset the loss of the fertilizer plant employment and the pending reduction in mining employment. Several options for development were examined, including ferro-silicon and silicon metal, poly-crystalline silicon, float glass, iron and steel, magnesium oxide, and other energy intensive industries that could take advantage of Cominco's low cost power.

We understand that a float glass manufacturing plant, which would employ about 200 persons, is currently being re-examined by a private sector proponent. If it is viable, this project would help considerably in offsetting the decline in the mine. Other development opportunities are also expected to receive consideration, especially small to medium developments related to tourism and retirement industries. In the long run further labour force and population decline appears inevitable, however, as it is highly unlikely that new industry creating more than 800 jobs will be found.

The final termination of mining, just before the turn of the century, will in all likelihood leave Kimberley with a considerably reduced labour force and population base. The housing stock, which is currently very reasonably priced, may attract persons working in other industries in the region (forestry, services and trade), a

FIGURE 3.1



KIMBERLEY OPERATIONS
1989-1997 MANPOWER
Number of Active Employees
1100
990
880
770
660
550
440
330
220
110
0
860
830
800
800
750
700
600
500
500
1989
1990
1991
1992
1993
1994
1995
1996
1997
Year

process which has already begun, bringing some influx of residents to bolster the population.

In what is perhaps a "worst case" scenario, a continuing and steady de-population can be expected for Kimberley over the 1993 to 2000 time period. The population loss could be in the order of 50%, if new economic activity is not found and the housing stock is not taken up by persons working elsewhere. Declining values in housing stock and commercial and business premises can probably be expected. Some of the building stock may well reach the end of its economic life during the coming decade, and be demolished.

The implications for municipal and regional government financial capability are not clear, as this process is expected to unfold slowly over at least a ten year period. The City of Kimberley currently (December 31, 1986) has $2,200,000 in debenture debt for general fixed assets, and $5,550,000 for utilities and sewers. The amortization period for this debt is not known; whether it becomes difficult to service will depend on the decline in the assessment base relative to the rate at which the debt is repaid. The Sullivan Mine is on the City's tax roll, and its closure will result in a very significant reduction in the tax base.

Relocation of the mine labour force from the Sullivan mine may pose some difficulties. It is understood that many are long-time Cominco employees, and may be reluctant to leave the region. If an early retirement option is offered it may appeal to a significant portion of employees who wish to remain in Kimberley, and this would stem the immediate population loss to some degree. There is considerable lead time for planning, however, and it is anticipated that an adjustment committee will be formed, with company, union, and government participation.

In terms of impacts on workers and community, the upcoming Sullivan mine closure is a major event, with significant consequences. It will warrant careful management.

Region Five - Gibraltar, Williams Lake

Gibraltar Mines Ltd. has operated a major open-pit copper and molybdenum mine near McLeese Lake, 50km north of Williams Lake, since 1972. Mining operations were curtailed in 1982 and stockpiled ore milled thereafter. In 1984 a scaled down operation at about half the former level was introduced. In 1986 a bio-leaching operation and electrolytic plant were built to recover copper leached from copper bearing wastes. The Gibraltar operations currently employ almost 300 workers, most of whom live in and around Williams Lake.

In an earlier study (Halvorson, ref. #4), a realistic life forecast for the Gibraltar mine operations was stated as 3 to 4 years, indicating a closure in 1992 or thereabouts. However, if copper prices remain at 1987/88 levels the closing date could be pushed back to about 2002. Prospects for locating additional ore bodies to extend mining further than that are considered modest, and a closure soon after the year 2000 is regarded as likely. The bio-leaching and electrolytic plant processing tailings and waste rock could also cease to operate before the year 2000. These activities currently provide employment for about 30 to 50 workers.

Although we don't have information on age and skill classifications of the Gibraltar work force, it seems reasonable to assume that they would find alternate employment in the mining industry should they desire to do so. This assumes that existing programs through the CEIC would be used, and that the Gibraltar closure would not come during a severe economic downturn in the industry.

It appears that Gibraltar employees should not find disposal of housing stock a serious impediment to mobility. We understand that the mine workers' homes are not concentrated in a single location near the mine, but are apparently dispersed through the Williams Lake and as far north as Quesnel. While not buoyant, the housing market in the area generally is stable. A closure will not have a major negative impact on the local economy (see Table 3.1; Williams Lake is indicated to have a 7% dependence on the mine, the Area a 6% dependence), and is not in itself likely to cause a decline in housing prices and "trap" workers who want to relocate.

Although the Williams Lake area economy is reasonably diverse, the loss of 250 to 300 local jobs (the number that would be retained in the leaching and electrolytic operations is assumed to be about 50) is not insignificant. Given a dependence on the mine in the order of 7%, there is bound to be an initial reduction in demand for goods and services and some falling off in local business. If the area experiences moderate growth in other sectors, however, the local economy should be stable and aggregate business activity may decline only slightly and for a short term. We would not expect, therefore, a noticeable impact on the value of local business and commercial premises.

For the reasons given above, it is not expected that closure at Gibraltar would have any significant effect on the financial capability of the local and regional governments, with the exception of the small community of McLeese Lake. The impacts on housing and commercial and local government services in McLeese Lake may be more severe than in the area generally.

Overall, subject to a qualification that the closure not occur during a general decline in the provincial economy, and in particular in the forest industry which is regionally very important, the Gibraltar closure should require little government action aside from the routine application of manpower adjustment assistance programs. Within our classification system, the Gibraltar closure would be characterized as taking place within a *"diversified economy"*, with the *"resources absorbed"* into other economic activity.

Region Six - Silbak Premier, Stewart

The Silbak Premier gold mine, about 15 km north of Stewart, will come into production in the summer of 1989, with an expected mine life of just over 10 years. Employment is estimated at 160.

The District of Stewart is by now well experienced with the ups and downs of mine openings and closures, as noted in the previous discussion. Should the Silbak Premier mine remain a stable producer, the significance of a shutdown at the turn of the century will depend very much on what other activities are taking place in the local economy at that time. As noted, the economy is considerably more diversified than it was at the time of the Granduc and Canada Wide shutdowns -- Table 3.1 indicates a population and labour force dependency of 12% in 1986, versus 83% in 1981. With the inclusion of the Silbak-Premier workers and their dependents in the calculations, the dependency ratio will rise to about 50%. However, there are prospects that other mines in the region may be developed during the 1990s, and it has also been indicated that establishment of a small pulp mill is under investigation.

It is difficult at this time to gauge how significant a Premier Silbak shutdown would be, if it did come in the 1999/2000 time period. What is known is that Stewart has coped with the kinds of problems that arise from closure in the past, and within the local economy both workers and entrepreneurs are understood to have developed a level of caution or prudence which is consistent with the uncertainty of the town's economic base. If the Premier Silbak closure comes with some advance warning, and not unexpectedly as was the case with the two prior closures at Stewart, it should be an event that can be "managed" reasonably well.

Region Seven - Cassiar, Cassiar

As noted in previous discussion, a 1991 closure of this open-pit asbestos mine in the northwest of the Province was averted when the province provided a loan to the company for development of an underground deposit. This is expected to extend mine life for a minimum of 8 years, so that a closure in the 1999/2000 time frame is now expected.

1988 employment at the Cassiar mine is estimated at 330, and this will probably increase through the decade with the underground mine in operation. When closure comes relocation of the labour force should not be particularly difficult; it is understood that the housing in Cassiar is provided by the company and workers will have few financial ties which would impair their mobility. The bulk of the costs of closure, in terms of write-down of housing stock and other structures in the town would be borne by the company, with relatively few "third party" considerations in this regard. There is no local government in the area, the entire Stikine region being unincorporated territory. The only consideration is a school district, with debenture debt of $7,950,000 (1986), which would undoubtedly be affected by mine closure and loss of assessment base. As regional fiscal capability declines, the share of education costs borne by the province will rise.

In terms of the usual criteria for assessing the implications of a closure for workers and communities, the Cassiar case would at first appear to fall in the "*remote mine/company town*" end of the spectrum. The problem with this classification, however, is that the remote location of this company town has some strategic significance. Although a company town, Cassiar serves not only the Cassiar mine, but also the nearby Erickson gold mine (currently closed) and is a focus for other activities in this sparsely settled region of the province. Closure of the mine would mean abandonment of the town, or reduction to a mere "outpost". We infer that it was to prevent this, which would leave a large void in the map of northwestern British Columbia, that the loan assistance was provided to ensure development of the underground reserves. Should closure be faced again at the turn of the century it is not clear whether the town will be seen to have the same strategic importance; nor whether there will be opportunities to extend the mine life further. These considerations are best left until near the end of the life of the underground reserves.

3.5 Major Mine Closures Beyond 2000

Although it is outside our terms of reference, the data we have assembled indicate several major closures can be anticipated in the first decade of the next century, with serious impacts on both workers and communities. Some comments on the most significant of these -- the Highland Valley copper mine; coal mines in the Southeast; coal mines in the Northeast -- are offered here. Some would argue that it is speculative to assume that these mines will continue to produce beyond the turn of the century, which is a moot point. It is equally speculative to estimate that they will close in the early years of the next century, and for that reason all we attempt here is to highlight the community and regional dependence on these mines -- indicating the extent of dislocation which may have to be accommodated.

Region Three - Highland Valley Copper

Significant adjustments have taken place among the various copper mines operating in the Highland Valley area since the early 1960s. The experience with the Craigmont, Bethlehem, Highmont, and Afton mines has been discussed. Of these, the Afton/Ajax operation is the only one remaining in production.

Rationalization of the Lornex and Valley Copper mines in the Highland Valley Copper Partnership has created a major producer. Within the partnership the Lornex mine is expected to cease production in a few years, with the Valley Copper mine accounting for all production thereafter. By 1990 Highland Valley Copper expect to be processing some 48 million tonnes of ore per year, "making it the second largest copper mine in the world, after Bougainville in Papua New Guinea" (Halvorson, ref. #4). Published reserves are 847 million tonnes, which, extracted at a rate of 48 million tonnes per year, indicate the operation will continue to 2004.

Two additional ore bodies may be put into production to extend the operating life. Highmont has published reserves of 103 million tonnes; Cominco's J-A orebody is indicated at 260 million tonnes. If economic to mine, these would extend the operating life of the Highland Valley Copper Partnership to about the year 2012.

As can be seen from Table 3.1, the regional impact of these copper mines is significant. The Highland Valley mines and mills currently employ over 1,400 workers, and if the Afton/Ajax opertion is included the total rises to almost 1,600. Significant population and labour force dependencies are noted -- Kamloops 8%, Logan Lake 94%, Ashcroft 52%, Cache Creek 18%, Merritt 11%. If closure of the Highland Valley partnership mines comes in the 2005 to 2010 period (Afton/Ajax is expected to close in 1997) and the balance of the regional economy remains substantially as it is today, a major relocation will have to be dealt with. There will be significant impacts for *workers* and *communities*. There is little point in speculating here on these impacts, or how they might best be dealt with, but the degree of regional dependency on this one major copper producer is noteworthy.

Region Four - Southeast Coal

The Southeast Coal area, centred on the historic City of Fernie (map 3.9), has been the historical, and is the current, coal centre of the province. Coal mines operated in the area as early as 1898, but activity declined through the 1930s, '40s, and 50s. The Kaiser Resources initiative to develop a major coal complex in the 1960s marked the rebirth of the area as a major coal producer.

Five mines are currently in production: Westar's Balmer and Greenhills mines near Sparwood and Elkford, respectively; Fording Coal's mine north of Elkford; the Byron Creek Collieries mine east of Fernie; and the Crows Nest Resources Line Creek mine northeast of Sparwood (see map 3.9). Coal reserves in the area are vast, and with production diversified among several mines it is unlikely that a total shutdown would occur. Before the year 2000 the fate of individual mines is more likely to be market driven than determined by resource exhaustion (see chapter 2?). While it is noted that with heavy debt burdens the viability of some producers is currently questionable (Coal Association of Canada, ref. #2), it is anticipated that with financial restructuring production will continue through the 1990s.

These mines will not operate forever, however, and whether a major or partial downturn comes in the early 2000s, or after 2010, the data in Table 3.1 indicate how widespread the ramifications could be. Direct employment at the five mines is currently in the order of 3,500, and with a regional multiplier of some 2.0 to 2.5, the total employment currently supported is estimated to be from 10,000 to 12,000. Population and labour force dependencies are indicated as 58% for Fernie, 87% for Sparwood, 98% for Elkford, and 6% for Cranbrook. The 6% for Cranbrook masks the dependency on mining of a large portion of the manufacturing, trade, and service sectors, businesses that "export" services to the Fernie area. Although not incorporated in Table 3.1, there are dependencies, via the Crowsnest Pass transportation corridor, with communities in Alberta as well.

Given the very substantial commitments by mine workers and others to these communities in the Southeast Coal region and the significant linkages through other parts of the provincial economy, much rests on maintaining stability of output for as long a period as possible. Should a major downturn or closure loom on the horizon, a strategy to deal with it most effectively and minimize the dislocation costs could be developed, with cooperation of all of the major "stakeholders" in the region.

Region Eight - Northeast Coal

The northeast region became the province's second major coal producing area in 1983, with the first shipments of coal from the two new mines -- Teck Corporation's Bullmoose, Denison Mines' Quintette -- established in the area. Despite the serious financial difficulties encountered by Quintette, production from the area has been maintained, and the two mines currently employ over 1,700 persons directly. With a regional multiplier in the order of 2.0, total employment of over 3,000 in the general area is indicated.

The situation is similar to that surrounding the southeast coal producers. Population and labour force dependency is almost total at Tumbler Ridge (96%) and significant at Chetwynd (24%). Transportation and other linkages extend the economic impact of the northeast coal producers across the northern part of the province to the coal terminal at Ridley Island, near Prince Rupert.

Market and financial uncertainty overhangs the northeast coal producers, but it is expected that output will be maintained through the 1990s. During this time the regional economy may diversify somewhat, in light of proposals by Canadian Hunter to develop natural gas reserves and build a gas cleaning plant near Tumbler Ridge. Since coal resources in the region are vast and subject to market demand, it is conceivable that new mines could open to maintain or expand production should the present operators exhaust their resources. Certainly with the modern infrastructure that is in place, there appear to be few constraints to expansion.

As with the southeast coal mines, major commitments have been made to coal production in the northeast -- directly by the mine companies and their employees, indirectly by others in a transportation network and other key elements of infrastructure. The implications of a closure will be far reaching, and should it occur before the investment in community facilities and infrastructure has been substantially amortized, significant costs will be imposed on many parties. These circumstances would seem to warrant reasonable efforts to ensure that production from this area is maintained as long as possible, as long as direct subsidies are not involved.

It should be noted that a single event may have an overwhelming influence on the future of coal production in the northeast. The price received by the Quintette mine under its contract with purchasers, currently well above world market prices, is under arbitration. The decision of the arbitrators is expected in the fall of 1989, and could have a major impact on the timing of mine closure. At one extreme, if the arbitrators support the existing contract and prices, there would be little impact on production and employment at the mine. At the other, if the position of the coal purchasers is supported and prices are reduced to current market levels, the company has said that the mine will close. Some expect that the arbitrators may arrive at a middle ground recommendation.

In this report, we do not speculate on the outcome of the arbitration. Even if the arbitrators decide in favour of the purchasers, we expect that the purchasers will attempt to come to terms with the company at a price that is in excess of cash operating costs, and avoid a shutdown. The reason for this is that withdrawal of the Quintette output of 5 million tonnes per year, which might also trigger withdrawal of the Bullmoose output of 1.7 million tonnes per year, would take some 10% of Japanese coking coal imports out of the market at a time when markets are tightening and prices starting to rise. The consequences of a Quintette closure, from the perspective of the purchasers, could thus be a price increase in all other coal purchased, offsetting any gains from an arbitration decision relieving them from obligations under the current contract.

It is for these reasons that we have chosen to project that production from the northeast coal mines will continue into the post-2000 period. Others (Halvorson. ref. #4) hold contrary views and expect a closure before 1995.

CHAPTER FOUR

EXISTING LABOUR AND COMMUNITY ADJUSTMENT PROGRAMS

In this chapter we trace the evolution of labour and community adjustment programs applicable to mines and mining communitites, beginning with the 1982 *Report of the Task Force on Mining Communities* (ref #14). That report resulted from the deliberations of a Task Force struck to "examine the special problems of communities dependent solely on the mining industry", at a time when "the great mineral recession of 1981-82 has tested and is increasingly testing the ability of companies to survive ... bringing acute hardship to individuals, ...leading to the virtual closure of some communities, possibly for good" (ref #14, p. iii).

The general economic climate surrounding mining communities is considerably different at present, but mine closures can still be anticipated. Closures may result from exhaustion of an orebody, or from individual mines simply not being cost competitive (as for instance is the case with two iron ore mining operations currently being closed in northern Ontario).

The findings of the 1982 Task Force report provide a starting point for our review of programs to assist labour and communities, and we then attempt to trace the evolution of current programs.

4.1 Labour Adjustment Programs

As a general proposition, labour is regarded as a mobile and adaptable factor of production. Adaptable in the sense that people seek training in skills that are expected to be in demand; mobile in the sense that people will seek employment where opportunities are known to be available. Imperfections have long been acknowledged, however, in the ways in which those seeking employment are matched, skill and location wise, with available employment opportunities. In response, federal and provincial governments have labour, employment, and advanced education ministries concerned with, among other things, both training and mobility.

Assistance in both of these areas can be appropriate in the event of a mine closure: training assistance for skill development for workers wishing to seek alternate employment, or to adapt to new technology within the mining industry; mobility assistance for those wishing to relocate. The 1982 Task Force found that assistance in both areas had been provided by federal and provincial programs.

Federal Programs

A considerable number of federal programs were identified by the 1982 Task Force. At that time they could be grouped as the main programs available through the Canada Employment and Immigration Commission (CEIC), other CEIC programs, those sponsored by the Unemployment Insurance Commission, and those available through Indian and Northern Affairs Canada (DINA). A major transition in federal programs occured in 1985, when the Canadian Jobs Strategy was implemented.

Canada Employment and Immigration Commission: Major Programs

The major vehicle identified for providing long term assistance is the Canada Employment and Immigration Commission. In 1982 the CEIC offered three programs: the Manpower Consultative Service (after 1985 the Labour Market Services Branch), Work Sharing, and the Industry and Labour Adjustment Program. Discussion of current programs here is limited to those administered by the Labour Market Services Branch.

Manpower Consultative Service/Labour Market Services Branch

The Manpower Consultative Service was established in 1963, to encourage joint action by employers and employees to deal with work force problems. Two approaches to providing assistance to labour were administered by the Manpower Consultative Service in 1982. Financial support was provided to employer/employee committees seeking solutions to problems arising from technological change, layoffs/closures, industrial expansions and other disruptions. In addition Mobility Assistance, under the Labour Mobility and Assessment Incentive Regulations, was administered by the Manpower Consultative Service.

A number of examples of the work of employer/employee committees were noted in the 1982 Task Force report. These included Joint Manpower Assessment and Planning Committees set up for two mining towns in Ontario; a Manpower Adjustment Committee formed to deal with unemployed mineworkers at Lynn Lake and Leaf Rapids, in Manitoba; in Saskatchewan the Manpower Consultative Service and the Manpower Mobility Incentive were used for employees at Uranium City; and in British Columbia it was noted that while not a mining related application, the Manpower Consultative Service had been instrumental in the closure of the paper mill at Ocean Falls in 1980.

Specific examples of the application of Mobility Assistance under the Labour Mobility and Assessment Incentive Regulations were not given, but it was noted that for those employers who relocated workers in order to keep them suitably employed, up to 50% of the costs could be reimbursed. This assistance was offered to employers who had established a joint labour/management adjustment committee.

Since the 1982 Task Force report the Manpower Consultative Service has become the Labour Market Services Branch. The main program administered by the Branch with direct relevance to mine closures is the *Industrial Adjustment Service Program* (IAS). This program is explained in some detail in the material included in Appendix 1. It is used as a catalyst to bring employers and workers together to deal with changes in the workplace -- both change that has already occurred and change that is anticipated. The recent report of the Advisory Council on Adjustment (ref. #1) recommends that funding for this program (currently $11 million) be doubled and personnel increased.

To come into force the IAS requires an Assessment Incentive Agreement, parties to which are the employer, the employees, the CEIC, and the Province of British Columbia. This Agreement will lead to the establishment of an Adjustment Committee, to achieve the objectives of the Agreement. The committee will consist of a representative of the employer, an employee representative, and an impartial chairperson. Ex officio members of the committee will include the Labour Services Branch consultant, and a representative of the province. Through the Agreement the CEIC provides financial incentives, usually 50% of the cost, to support committee activities.

As indicated in the appended material, the IAS Program operates on three general principles:

(1) Research and planning in advance of change, to recommend suitable private and public adjustment measures.

(2) A joint management/labour approach to facilitate worker participation.

(3) Coordination of private and public adjustment measures including the full range of government programs.

While the objectives of each Agreement will be different, depending on the industry and employer involved, and the type of change dealt with, the primary objectives are generally focussed on labour adjustment.

Assessment Incentive Agreements, and their predecessor Manpower Adjustment Committees sponsored by the Manpower Consultative Service, have been instrumental in coping with the adjustment to a number of significant mine closures in British Columbia. Included are closures at the Phoenix mine, Kitsault, the Bell mine, Tasu, Granduc/Canada Wide and Scottie Gold. An agreement to deal with impending closure is currently in place at Brenda, and agreements to assist with adjustment to structural change are in place with Westar Mining in the southeast coal region, and with Silver Ridge in the Kootenay.

The IAS Program drives several other CEIC programs for training -- a continuing employment initiative to help workers find new jobs in place, a mobility program with relocation and travel incentives, and an older workers self-employment initiative.

The other main programs under the Canadian Jobs Strategy that could be applicable in dealing with a mine closure include Skill Investment, Skill Shortages, Job Development, and Job Entry. Information on these is included with the material in Appendix 1. A brief outline of each is given here.

Skill Investment - Provides employers and employees a chance to adapt to changing technological and competitive conditions which threaten job security.

Skill Shortages - Assists employers to train workers in skills designated as being in short supply. Options include workplace-based training, institutional training, and relocation and travel assistance.

Job Development - Provides training and job opportunities for those who have been jobless for six months.

Job Entry - Assistance to individuals having difficulty making the transition from school to work, or for women re-entering the work force.

As with the IAS, the Advisory Council on Adjustment (ref. #1) has recommended that the federal government increase significantly -- by $200 to $300 million -- the annual funding for programs such as these, "which are particularly germane to adjustment" (ref. #1, p. xxvi).

Other CEIC Programs

In addition to the main programs discussed above, additional programs and services with a specific labour orientation were offered by the CEIC as of 1982. The *Local Employment Assistance Program (LEAP)* was intended to increase the self-sufficiency of workers who normally have difficulty finding and retaining jobs. Through the *National Industrial Training Program* the federal government would reimburse employers for a portion of the cost of in-house training; the purpose being to help industry expand and improve its training capacity to meet present and long term skill needs. The *National Institutional Training Program*, a co-operative undertaking with a province, provided occupational training to adults to increase earning capacity or opportunities for employment. These programs have now been subsumed in the programs under the Canadian Jobs Strategy reviewed previously.

The *Canada Manpower Mobility Program*, intended to encourage the geographic mobility of workers, provides financial assistance to enable workers to travel to seek employment, take temporary employment, or relocate. This program has remained in place, and was referred to above as one of the programs "driven" by the IAS Program.

Unemployment Insurance Employment Training

A number of sources of income support have been available for workers who are referred by the Unemployment Insurance Commission. An *Outreach Program* provided for the temporary operation of community based projects to provide employment when the necessary services could not be provided by the Canada Employment Centre. *Canada Community Development Projects* provided term employment by funding various community projects. *Canada Community Service Projects* provided employment by creating community service jobs through non-profit organizations. The *National Job Bank* is a computerized listing of difficult-to-fill employment opportunities, through which qualified workers can be put in touch with employers. *Developmental Use of UI Funds for Job Creation*, was provided for under Section 38 of the Unemployment Insurance Act, to help laid-off workers continue to use their skills during a short-term unemployment period. Under Section 39 of the Unemployment Insurance Act, assistance can be provided to laid off workers taking approved courses, for a maximum of 104 weeks.

These programs have evolved, and continue to do so. Recent recommendations (Advisory Council on Adjustment, ref. #1) call for a doubling of the $255 million currently budgeted for job training activity under Section 39 the Unemployment Insurance Act; and the federal government has announced that it intends to reform the Unemployment Insurance Program so as to re-direct expenditures away from regions with low unemployment rates and into training programs. While existing and new programs may be of assistance to individuals whose personal circumstances meet their criteria, they are not seen as having the broad type of applicability that is required to deal with the permanent adjustments that must be made following a mine closure.

Labour Canada - Program for Older Worker Adjustment (POWA)

The Program for Older Worker Adjustment was announced by Labour Canada in October of 1988, in response to the difficult circumstances that some older workers face following layoffs. POWA is intended to focus selective assistance on *major* permanent layoffs that could cause hardship for a significant number of older workers. All avenues to re-employment must be exhausted before assistance, targeted to workers between 55 and 64 years of age who have been in the work force 15 of the last 20 years, is made available. For those who qualify, POWA will provide income assistance at a level between social assistance and unemployment insurance.

Federal contributions under the program are contingent on a provincial financial contribution, with contributions sought from the employer as well. Eight provinces and territories, including British Columbia, have agreed to participate in POWA. There have been no payments under the program to date, as applications for assistance are still being reviewed.

Programs through Indian & Northern Affairs Canada (DINA)

Programs available at the time of the 1982 Task Force report were targetted to Indian and Inuit people. They included occupational training to supplement and complement CEIC programs when necessary, assistance with on the job training through contracts with employers, and financial assistance to increase job mobility -- both in seeking employment and relocation if suitable employment was found.

A major current program available to assist Indian people with economic development is the *Resource Economic Employment Development (REED) Program*. Sponsored by the Department of Indian and Northern Affairs, this provides a source of financing for the development of viable economic and employment opportunities for Indian people. Grants or contributions are available for infrastructure, planning and support services and equity; loans and loan guarantees are available for working capital and fixed assets; and management advisory services can be provided. This program could be relevant to a mine closure situation in British Columbia, although it is our understanding presently that closures involving a high proportion of Indian people in the labour force are unlikely to occur.

Provincial Programs

At the time of the 1982 Task Force report, most provinces were found to have programs which could be applied to the problems of mining communities, although none were specifically designed for that purpose. These programs generally focussed on manpower adjustment, job creation, and economic development incentives.

In British Columbia the programs with a focus on labour and workforce adjustment included *educational and vocational training*, to help income assistance recipients prepare for employment; *manpower adjustment service*, to help workers in specific regions deal with seasonal, cyclical or structural economic problems; and *employment and manpower development*, to assist in identifying employment opportunities and training.

There has been considerable change in the organization of provincial ministries since that time. Currently two Ministries -- Advanced Education and Job Training, and Social Services and Housing have programs which could be invoked in the aftermath of mine closure.

The Ministry of Advanced Education and Job Training represents the province on the Assessment Incentive Agreements sponsored by the CEIC (see above). In addition it administers a *Training Opportunities Program*, which provides assistance to employers in creating job opportunities for prospective employees. Target groups for this program include the disabled, those seeking to upgrade skills, people displaced and unemployed due to technology, and women seeking training in non-traditional jobs. This program could be used to create employment for persons affected by mine closures, although the extent of assistance (50% of wages to a maximum of $3.00 per hour for 4 months) is limited, which may reduce its appeal for such circumstances. The Ministry is also responsible for British Columbia's participation in the *Program for Older Workers Adjustment*.

The Ministry of Social Services and Housing operates two employment programs -- *Employment Plus*, and the *Employment Opportunity Programs*. These are intended to provide employers with financial incentives to hire and train income assistance recipients. The extent of assistance is limited (50% of wages to a maximum of $3.50 per hour for up to six months), and it does not appear that those affected by mine closures would be eligible in any event.

4.2 Community Adjustment Programs

As noted in Chapter One, the adjustment problems following a mine closure may extend beyond the direct and indirect labour force as workers, per se. Workers' willingness to relocate, despite the assistance that is available, may be impaired by ties to fixed assets (housing, commercial buildings). Local and regional governments may face serious problems with continued funding for a variety of fixed infrastructure investments. In such cases community adjustment assistance may be called for in addition to labour adjustment assistance.

Federal Programs

At the time of the 1982 Task Force report the federal program most relevant to community adjustment was the *Industry and Labour Adjustment Program (ILAP)*. This resulted from a 1981 initiative by the federal Ministers of Employment and Immigration, Labour, and Industry Trade and Commerce/Regional Economic Expansion. The objective was to promote industrial restructuring and labour market adjustment to assist communities, industries and workers most severely affected by permanent loss of jobs. Of direct assistance to communities affected by a mine closure were the efforts to assist small enterprises and provide local employment opportunities, thus mitigating the impacts of employment loss directly within the affected communities.

This program was transformed into the *Community Futures Program* in the 1985 introduction of the Canadian Jobs Strategy. This is now the federal program that is relevant for assisting, on a community-wide basis, with the development of alternative economic activities to fill the void left by a closure. Material providing an overview of the Community Futures Program is included in Appendix 1. It should be noted in this regard that while eligible communities are to be those "...outside of the metropolitan labour markets that suffer from acute or chronic unemployment levels higher than the provincial average...." the program is also intended to help "... communities adjust to structural and economic changes;...". We understand that it is in this context that the Community Futures Program could be called upon in the case of a mine closure.

The main actions that would be taken under this program are directed by a Community Futures Committee, which provides a vehicle for participation by "...representatives of local groups in the development of a labour market strategy...". The committee may receive funding to assist in:

- analyzing community problems;
- identifying solutions to these problems;
- recommending participation in program options;
- accessing other sources of public or private financing; and

- overseeing the implementation of committee recommendations.

The five program options that are available via committee recommendations are:

- assistance for workers to become self-employed;
- business development centre
  - funded over 5 years to provide technical assistance and consultation
  - a fund for investment in small businesses, eligible to receive operating funds and funds for investment over a 5 year period;
- relocation and exploratory assistance;
- community initiative fund; and
- purchase of training courses.

Beyond the Community Futures Program, the much more broadly targeted Federal-Provincial Economic and Regional Development Agreements could act as vehicles for the delivery of federal assistance to specific communities, but that is not their intent. These programs lack the specific focus required for community adjustment assistance in the event of a mine closure and, because they are governed by agreements between the federal and provincial governments may not be sufficiently flexible.

In addition, the *Western Economic Diversification Program*, administered by the Department of Western Economic Diversification might be drawn upon if a significant opportunity was identified to replace the economic activity of a mine being closed. The purpose of the program is to encourage companies to establish or expand facilities which are of strategic importance in diversifying the economy of Western Canada.

Provincial Programs

At the provincial level the 1982 Task Force report identified a number of programs with a community adjustment orientation. An interesting concept from *Manitoba* was the *Mining Community Reserve Fund*. This reserve is funded by transfer of up to 3 percent of metallic mineral royalties, and is available to help local governments deal with the financial impacts of closures. Payments have been made in support of municipal services following mine closures or major permanent layoffs.

In *Saskatchewan* the Uranium City Task Force, dealing with closure of the Eldorado Nuclear mine at Uranium City, noted several gaps in available assistance to a mine-dependent community facing a permanent closure, and unable to diversify. Among these were compensation for homeowners and business owners who had invested in the community, and relocation assistance for workers not employed directly by the mine.

We understand that Ontario is currently reviewing its programs in attempting to formulate a response to cutbacks and closures in industries in northern part of that province. Prior to its disbandment in 1987 British Columbia's Critical Industries Commission was visited by a task force from Ontario attempting to determine how the Commission had functioned and the approaches that it had found most effective. With the two iron mines currently being closed in northern Ontario (Sherman mine at Temagami, Adams mine at Kirkland Lake) the operating company, Dofasco Inc., has agreed to establish a $4 million fund to assist the two dependent communities and has also agreed to continue to pay real estate taxes during three years after the closure.

The 1982 Task Force report did not identify any British Columbia programs with a specific focus on community adjustment. As stated in the submission to that Task Force by British Columbia's Ministry of Municipal Affairs (ref. #10), ".. the provincial government has not had an "adjustment programme" in the sense of an organized response to issues of decline." That condition persisted through 1986, when a further paper by the Ministry of Municipal Affairs noted "with respect to alleviation the Ministry does not have formal programmes to assist communities which face crisis as a result of external economic events. For the most part Ministry programmes are designed to deal with normal change, not extraordinary change" (ref. #11). That report also noted "A number of existing provincial programmes could be applied to the problem of community adjustment even though their primary purpose is not adjustment. ...... at present there is no programme directed at facilitating community adjustment to radical economic change. Current provincial policy is to intervene only when catastrophe threatens and, even then, the emphasis is on the utilization of existing programmes." (ref. #11, section 4.2).

That report did note the experience of the Ministry of Municipal Affairs, and other provincial ministries, in dealing on an ad hoc basis with a mine closure at Stewart, B.C. One provincial program that was called on during the 1984 closure of the Canada Wide mine at Stewart was the *Community Organization for Economic Development (COED)* program, which is currently administered by the Ministry of Regional Development. This program provides a vehicle through which the province can cost share, with a local government, initiatives toward diversification of the economic base. Initial participation is in studies to develop an economic strategy; assistance can subsequently be made available for implementation -- as was the case at Stewart. The Ministry of Municipal Affairs has a somewhat similar *Economic Strategy Planning Grant Programme*, which provides financial assistance to encourage communities to undertake economic planning and initiate economic promotion efforts.

Other provincial programmes that could be applied to community adjustment include the *Enterprise Centres*, sponsored by the Ministry of International Business and Immigration. These act primarily as information conduits for business, and could be focussed on the needs of a community affected by a major closure. The Business Finance Branch of the Ministry of Regional Development administers the *Small Business Incentive Program (SBIP)* which is intended to assist small and medium sized enterprises to establish, modernize or expand to create new employment opportunities and diversify the economic base. Under this program funding for up to 50% of capital costs, to a maximum of $500,000 for a term of 5 years can be provided. Projects must not exceed $2 million, however. If suitable projects were identified in the wake of a mine closure, this program could be of considerable assistance although, as noted, only with projects of relatively modest scale.

CHAPTER FIVE

CHANGES OR NEW INITIATIVES FOR POLICIES AND PROGRAMS

The kinds of problems that may arise with a mine closure are reviewed conceptually in Chapter 1, and practical experience with closures and near-closures in British Columbia is reviewed in Chapter 3. Federal and provincial policies and programs which can be activated in response to problems arising from mine closures are canvassed in Chapter 4. The issue which this chapter addresses is simply whether the policies and programs match or "fit" the problems. If it appears that there are gaps in the coverage, consideration is given to whether there is scope for changes or new initiatives. [*Note that the focus throughout this report is how to deal with closure of an existing mine, not how to prevent a mine from closing, and not how to establish a new mine-dependent community.*]

At the outset it was noted that a mine closure effectively releases or "frees up" factors of production. Mobile factors, in particular labour, can seek alternate employment, possibly elsewhere in the economy. Fixed factors are available for alternate uses *in situ*, and their ultimate value will depend on the extent to which demand for them emerges. The problems and policies to deal with them are discussed separately in this chapter for labour, and for other fixed factors.

5.1 Labour Problems and Policies

The general circumstances surrounding any given mine closure will have a significant influence on the implications for workers. And for any given closure the implications may be very different for individual workers, depending on their age, skill, seniority, and so forth.

At one level of generalization, the more unexpected a mine closure the more likely it is to create problems for workers. Of equal consequence are conditions in the economy generally at the time of closure. If economic conditions are buoyant alternate employment is likely to be available; if the economy is in recession there is less likely to be a ready demand for the workers released by the mine. The age of individual workers and their willingness to undergo the process of change and adjustment is also a factor. And it is important not to lose sight of the fact that not only mine workers are affected by a closure. In a single industry town others in both private and public sector employment may face the same adjustment process as the mine workers.

Numerous programs are available to assist workers in making a transition between jobs following a mine closure, as noted in Chapter 4. The first to provide the short term backstop or "safety net" is the Unemployment Insurance Program. This is generally widely available, and depending on length of time employed would extend both to mine workers and others whose jobs were affected by a mine closure. Changes currently being introduced to the Program will increase the length of time a worker must be employed before being eligible for benefits. This is not likely to reduce benefit availability to mine employees in most closure situations.

Beyond the simple safety net concept there are a number of important programs that are available to assist *mine workers*. Services under these programs are generally delivered through Employment and Immigration Canada's Labour Market Services Branch. The key is the Industrial Adjustment Service (IAS) Program, under which Assessment Incentive Agreements provide "passports" to the support available through other programs, such as Skill Investment and Skill Shortages.

We note only a few reservations with respect to the IAS Program and Assessment Incentive Agreements. First, the process requires the employer to enter into an Agreement and be prepared to share in the costs of the Adjustment Committee -- if the employer is not willing to do this the process is not activated. In stressing the importance of these processes, and the value of advance warning at times of major layoffs, the recent Report of the Advisory Council on Adjustment (ref. #1) noted that in some jurisdictions (Manitoba, Ontario, Quebec) group termination legislation "...provides for joint adjustment committees made up of employer and employee representatives. The purpose of these committees is to facilitate the adjustment process by minimizing the impact of layoffs on workers and assisting in their re-employment" (ref. #1, pp55/56). The IAS Program has served on a number of previous occasions involving mine closures in British Columbia and the value of employer/employee adjustment committees is well established. **To ensure that such a process is available in future there may be merit in introducing legislative requirements similar to those reported for Manitoba, Ontario and Quebec.**

Second, the services under an Assessment Incentive Agreement are available to the mine workers, represented by their union, but rarely to other workers in service or secondary occupations who may be equally affected by a closure. Given the way in which the costs under an agreement are shared by the employer and that many of the secondary employers will have limited financial resources, it is understandable that the scope of Agreements has generally been limited. However, while employers and employees are required to participate in an Agreement it should be noted that Employment and Immigration Canada can assume all the costs "...in the case of bankrupt firms, or *certain community-wide IAS committees* [emphasis added]." (See Appendix 1, Canadian Jobs Strategy, p. 8). **There would appear to be considerable merit in having such community-wide committees established, and we believe that this option should be given more emphasis in the IAS process. The provincial government should be urged to join with EIC in funding such community-wide committees, as is presently provided for in the administrative framework, to ensure that assistance is available to the full spectrum of dislocated workers.**

Finally, we note the admonition of the Advisory Council on Adjustment that "...the government double the Industrial Adjustment Service funding and increase the personnel required to administer the program;" (ref. #1, p. xxv) and the further call for a significant increase in the funding for programs such as Skill Shortages and Skill Investment (ref. #1, p. xxvi). We do not believe that funding constraints have hampered the ability of agreements under the IAS to serve the interests of workers involved in mine closures in British Columbia in the past; it may be prudent to indicate support for the overall funding recommendation of the Advisory Council, however, if the IAS is to continue to be looked to as a leader in the adjustment process in future.

Further programs which may assist with a transition and training between jobs are available under Section 39 of the Unemployment Insurance Act (again an aspect of adjustment for which the Advisory Council report urges a doubling of funding). Finally, the Program for Older Workers Adjustment, although just introduced, will attempt to assist with the difficulties of adjustment for workers between 55 and 64, arising from *major permanent* layoffs.

Overall we can see no call for *new* programs to assist workers who are involved in a major mine closure. We distinguish, however, between those directly involved, as mine workers, and others in secondary or service occupations who may be equally affected by a closure. Existing programs are usually available only to mine workers, and it would seem equitable that some means of broadening applicability be considered. We believe our thinking in this regard is consistent with that of the Advisory Council on Adjustment whose recommendations included promoting "...the swift re-integration into the work force of *all* workers displaced by economic change of *any kind*" (ref. #1, p. xvii); and who call for "modifying and reoreinting existing programs, rather than making a massive injection of funds into new programs." (ref. #1, p. xxiii).

5.2 Problems with Adjustment for Fixed Factors

We have identified two separate, but in principle comparable, concerns regarding the impacts of mine closures on fixed assets. One has to do with the privately held stock of housing, and commercial and retail buildings and properties. The second relates to local government investment in fixed infrastructure.

Housing and Commercial Properties

Problems of this type can arise when there is a significant component of private investment in housing, commercial buildings and other fixed structures, and the timing of a mine closure is inconsistent with expectations at the time the investments in those structures were made. Owners may face loss of equity (which may impede their mobility as workers), and lenders may find that the value of properties is no longer adequate to secure funds that have been loaned. Concerns over the value of housing stock and the commercial cores of several small towns were very much in the fore in some of the cases brought to the Critical Industries Commission in the 1985 to 1987 period.

Neither the federal government nor British Columbia have programs in place to address problems of this nature. They are at best addressed indirectly through programs such as Employment and Immigration Canada's Community Futures, or the provincial Ministry of Regional Development's Community Organization for Economic Development, both of which try to stimulate "replacement" economic activity which would have the effect of sustaining the demand for such fixed assets.

Whether there should be programs dealing directly with these issues is a moot point. On one hand it can be argued that persons making investments in fixed assets do so knowingly and should accept responsibility for the outcome of their decisions. They have in a sense "speculated" on the future - if they are "right" they can expect to reap the benefits from their actions, if wrong they should be expected to accept the consequences.

Others will note that when a "natural" disaster strikes (a flood, earthquake, windstorm) emergency aid is frequently forthcoming to assist with losses of this nature. They will argue that similarities exist, and it is quite logical to extend emergency assistance to those who suffer from economic "disaster".

We are reluctant to recommend any new programs to deal with problems of this nature. While not unsympathetic to the argument that society should extend a "safety net" to those who suffer unexpectedly in this manner, we are also aware that any formal program could be extremely costly, difficult to constrain and administer equitably, and might also remove existing incentives to prudent and cautious investment in such "vulnerable" assets.

A means of providing indirect assistance under these circumstances has been identified, however, and in our view warrants favourable consideration. The Advisory Council on Adjustment argued that severance pay could be regarded as an amount paid in recognition of loss of capital built up by workers in their jobs, "...similar to the types of investments subject to capital gains tax that are given special treatment for income tax purposes. Severance payments also represent a financial base for individual initiatives, to ease adjustment or to consider alternatives, for example, by paying down a mortgage or starting a small business." (ref. #1, pp. 57/8). **The Council then recommends that severance pay be treated as a capital gain for income tax purposes, rather than the current practice of taxing it as income, and proposes that a maximum of $10,000 in severance pay be so treated.**

This is a useful recommendation which would provide some assistance to those facing a loss in the value of fixed assets as the result of a mine closure. It would have limited applicability, however, as the direct mine employees would probably be the only ones in a position to negotiate a significant severance package. **Something with broader applicability which might be considered would be allowing all those who actually experience a loss in asset value to deduct that loss from other income**

for income tax purposes. At present this opportunity is only available to those in business, where there is other business income against which losses can be deducted. **We suggest that broadening the availability of such an offset might be of considerable value -- especially to those in service and secondary employment.**

Local Government Infrastructure

Various levels of local government may have incurred long term debt to provide services to a mine-dependent community. This may include basic infrastructure such as streets and utilities, education and health care, and recreation facilities. If a mine closure results in a significant reduction in the local tax base the ability of the taxing authority to service its debt may be cast into doubt. This occured following a mine closure at Stewart, and could occur again.

As the Ministry of Municipal Affairs has stated the province does not have an established program to respond to such events -- "For the most part Ministry programmes are designed to deal with normal change, not extraordinary change." (ref. #11). The general expectation would be that in the event a local government was unable to service its debt the province, through the Ministry of Municipal Affairs, would provide the necessary funding. To do otherwise would risk the credit rating of all local governments that borrow under the auspices of the Municipal Finance Authority.

It is not clear that a specific program targeted at such occurences is either required or desirable. The Manitoba *Mining Community Reserve Fund*, which can be drawn upon to support municipal services following a closure, was noted in Chapter 4. But setting aside a special fund in anticipation of such events is really no different than being prepared to make whatever payments are necessary from general revenue on an "as required" basis, as British Columbia would do. The existence of the fund does nothing to reduce such costs or prevent them from arising.

As a preventive measure, the province could, through the Ministry of Municipal Affairs, Recreation and Culture, exert a strong screening authority over debts being incurred for what might be considered "vulnerable" services. We acknowledge that there will be difficulty in doing this, in view of the pressures to make a high level of amenities available in remote locations so as to attract a stable work force. However, the burden of attracting a stable work force should be borne by the mining company (and the resource) and not shifted, through general revenue, to the taxpayers of the province at large. **The Ministry might also consider taking steps to ensure that where debt is incurred for services that are highly dependent on a given mine, the amortization period is compatible with the expected mine life.**

As a further measure, consideration should be given to securing guarantees from mining companies for *new* local government debt, as was done with the North East Coal Development. This is likely to be resisted by the mining companies, however, unless they are also allowed to participate in the decisions regarding the expenditures they are asked to guarantee. It should also be noted that from the Province's perspective the guarantees are unlikely to be fully effective unless they extend beyond the immediate mine operating company and are secured by the full assets of the whatever parent company or companies may be participating in a mine development.

We do not suggest, therefore, that a special program be established to deal with the funding requirements of local government infrastructure in the wake of mine closures. The situation as it currently exists is one in which the province effectively "self insures" against such events and this, coupled with a prudent overseeing of investments that may be particularly "vulnerable" appears to be adequate.

5.3 A Process to Deal With Mine Closures

Nothwithstanding our view that existing programs are generally adequate to deal with the problems which may arise following mine closures, **we feel that there is a definite need to put in place a *protocol* to provide for an efficient *process* to deal with those problems.**

The first element of such a protocol should recognize the importance of early warning and lead time in dealing successfully with a closure. The Ministry of Mines and Petroleum Resources (MEMPR) should endeavour, as part of its annual survey for existing mines, to obtain forecasts from the mining companies on the expected life of operations. MEMPR should then report, to the extent that it can without divulging confidential information, those mines which are nearing the end of their reserves, or believed to be particularly sensitive to market conditions. This information should be promptly made available to other provincial Ministries that would be expected to assume responsibilities in the event a closure is announced -- in particular the Ministry of Municipal Affairs, Recreation and Culture, the Ministry of Regional Development, and the Ministry of Advanced Education and Job Training. This information should also be made available to those communities which are highly dependent on the mines, and would be seriously affected by the potential mine closures.

The second element of the protocol should endorse the important role, in dealing with the labour adjustment aspects of a mine closure, of the Assessment Incentive Agreements available under the auspices of Employment and Immigration Canada's Industrial Adjustment Service (IAS) Program. We note that the Province is now represented in this process by the Ministry of Advanced Education and Job Training. In the same way that the Ministry of Energy Mines and Petroleum Resources would be called on to provide advance notice of impending closures, the Ministry of Advanced Education and Job Training should undertake, as a result of its participation in the Incentive Agreement process, to inform other provincial ministries of the magnitude of impending closures and any sensitive issues that are identified by the Adjustment Committee.

The programs under which there can be "deliverables" as a result of the Incentive Agreement process are targeted on labour adjustment, however, and do not address the other important community issues which may arise in a closure situation. **Other forms of government action are required to deal with the threats to public and private investment in fixed assets.** These actions should include the search for sustaining economic activity, and considerations regarding the rationalization of local government functions. **The final element of the protocol, therefore, should be a "standby agreement" under which the Ministry of Municipal Affairs, Recreation and Culture and the Ministry of Regional Development agree to jointly undertake these functions, and to establish a "Community Adjustment Committee".**

That Committee should include representation from the Ministry of Energy Mines and Petroleum Resources, the Ministry of Advanced Education and Job Training, the Ministry of Social Services and Housing, and the Ministry of Labour and Consumer Services. Based on the experience in dealing with the Canada Wide Mine closure at Stewart in 1984 it is stressed that this committee should develop a strong linkage with the appropriate local and regional governments - and through the local

School District and Hospital District the provincial Ministry of Health and the Ministry of Education would be drawn into the process, as necessary.

What we are basically calling for is a committee which would formalize the functions that the respective Ministries performed on an ad hoc basis following the Canada Wide Mine closure at Stewart in 1984, and again in dealing with the "normalization" of Ocean Falls in 1986 and 1987. The process followed in the Canada Wide closure at Stewart is indicated in a 1984 report by the Ministry of Industry and Small Business Development (ref. #8) and the concept is reviewed in a 1986 report by the Ministry of Municipal Affairs (ref. #11). **With the addition that we stress the importance of involving the local and regional governments in the process, we support in principle the proposed organization to deal with mine closures outlined in the latter report (reproduced in Appendix 2 to this report).**

The other important matter to be addressed under these standby arrangements is possible coordination with Employment and Immigration Canada's Community Futures Program -- with particular reference to the Community Initiative Fund option. In any significant closure the provincial ministries will clearly have to deal with matters that fall within their mandates and jurisdictions, as they have in the past. The Community Futures Program does not offer an alternative to direct action by appropriate provincial ministries and local/regional governments. At the same time it should be recognized that it would be mutually advantageous to involve the federal ministry in the process -- in the first instance because of the funding available for cost sharing of studies and proposals, and secondly as a means of establishing linkages to other federal ministries with mandates for economic development and regional expansion.

CHAPTER SIX

SUMMARY

Major mines in British Columbia tend to have relatively long and stable operating lives, but mines do not operate forever, and some significant mine closures will occur in the coming decade. Depending on the general economic conditions at the time of closure and the emergence of alternate demand for the fixed investments dependent on the mine, closure can be a very significant event for mine workers, secondary and service workers, and their communities.

Review of experience with previous closures and near closures of British Columbia mines provides insights regarding the conditions that may give rise to problems. These can be portrayed as on a continuum, from the remote mine/company town case, to a middle ground where a mine is significant in a community's economic base and has prompted independent investment commitments, to the other extreme where a mine operates in a diversified economy with capacity to absorb the resources released from mining.

Closures of the remote mine/company town type have generally not been difficult in British Columbia. Relocation and re-employment assistance for the mine work force has usually been adequate. Because the company has been responsible for housing and infrastructure "other party" concerns have not arisen in these areas. Although very different in nature, closures in a diversified and growing economy also tend to involve little public or private stress and little call for government action.

Where serious problems do arise is in the difficult middle ground of the spectrum. A mine may be a significant factor in a local or regional economy, with other parties making independent decisions to invest -- housing, commercial, public/government - on the basis of expectations regarding the mine's operating life. If mine closure occurs before expected, owners may be faced with a substantial pool of investment that is only partly amortized, and the prospect of a significant writedown or loss. The mining company is not required to take costs of this nature into account in its closure decision, and the other parties frequently look to government for assistance.

Chapter 3 identifies a number of communities in British Columbia with high to very high degrees of dependence on specific mines. Port Hardy is heavily dependent on the Island Copper Mine, with Princeton almost equally dependent on the Similco copper mine. The large copper mines in the Highland Valley are critical to Logan Lake and Ashcroft, and significant to both Merritt and Cache Creek. Kimberley displays a high degree of dependence on Cominco's Sullivan mine, and the southeast coal mines provide the raison d'etre for Elkford, Sparwood and Fernie, and contribute strongly to Cranbrook as well.

The Village of Granisle is almost totally dependent on the Bell copper mine, and in that same region the Equity mine is a key in the economic base of Houston, as is the Endako mine for Fraser Lake. The remote town of Cassiar is a classic case of almost total dependence on the Cassiar asbestos mine. The District of Tumbler Ridge is equally dependent on the northeast coal developments, with those projects also being important to Chetwynd and the surrounding area.

Predicting mine closures is difficult, as several key factors -- price expectations, operating costs, economically accessible reserves -- will have a bearing on the closure decision. Forecasts of near-term closures are generally more reliable than those expected further down the road.

Significant closures that are expected in the 1990 to 2000 period, current mine employment and the most directly dependent community are summarized in Table 6.1.

In addition to these specific closures, expected largely because of exhaustion of economic reserves, the major coal mines of the southeast and northeast might well be placed on a "watch list", because of vulnerability to market conditions.

Of the fourteen closures that are anticipated before the year 2000, six have the potential for significant community adjustment problems. The six mines that have heavily dependent communities with limited alternative prospects include Island Copper (Port Hardy), Similco (Princeton), Bell (Granisle), Equity (Houston), Sullivan (Kimberley), and Cassiar (Cassiar). Among these six, impacts for the Island Copper and Sullivan mines are assigned a VERY HIGH significance rating. In the case of Island Copper this reflects the large number of jobs that will be lost, and the fact that mine closure in 1997 will follow the 1990 loss of 220 jobs associated with

Table 6.1
Expected Mine Closures, 1990-2000

	1990-1995	1996-2000	Current Employment	Significance of Closure	Priority of Action Required
Region I, Vancouver Island/Coast					
Island Copper (Port Hardy)		■ '97	550	Very High Impact	2
Region III, Thompson/Okanagan					
Brenda (Peachland)	■ '90		420	Low Impact	Monitor
Similco (Princeton)		■ 2000	340	High Impact	3
Blackdome (Clinton)	■ '92 ■ '93		140	Low Impact	Monitor
Nickel Plate (Penticton)	■ '94	■ '97	195	Low Impact	Monitor
Afton (Kamloops)		■ '97	180	Low Impact	Monitor
Region IV, Kootenays					
Sullivan (Kimberley)		■ '98	■ 2002 840	Very High Impact	2
Region V, Caribou					
Gibraltar (Williams Lake/Quesnel)		■ '99	■ 2002 270	Low Impact	Monitor
Region VI, Northcoast					
Silbak Premier (Stewart)		■ '99	160	Moderate Impact	
Johnny Mountain (Terrace/Vancouver)		■ '96	115	Low Impact	Monitor
Region VII, Nechako					
Bell (Granisle)	■ '92		255	High Impact	1
Equity (Houston)	■ '92 ■ '93		230	High Impact	1
Cassiar (Cassiar)		■ 2000	285	High Impact	3
Region VIII, Northeast					
Lawyers (Smithers/Telkwa)	■ '93 ■ '94		140	Low Impact	Monitor

the Canadian Forces station at nearby Holberg. For Sullivan the rating also reflects the large number of jobs being lost and the degree to which that mine has been the dominant force in sustaining Kimberley.

In our assessment of the Programs that are available to help those affected by the coming mine closures, a division has been drawn between programs that are aimed at labour force adjustment and those that are targeted on broader community or "fixed factor" adjustment.

Labour Adjustments

The extent to which mine workers will encounter difficulty in coping with closure will depend to a considerable degree on general economic conditions and the demand for their labour skills at the time that a closure occurs. Whatever these conditions (which this report does not attempt to predict), **the review in Chapters 4 and 5 indicates that there are numerous government programs available to provide initial assistance and support in labour mobility and in our view new programs are not required.** In the short run Unemployment Insurance will continue to offer a safety net; the special needs of older workers may be met through the newly-introduced Program for Older Workers Adjustment; and particularly appropriate to the "out-placement" process are the services available under Employment and Immigration Canada's Industrial Adjustment Service (IAS) Program.

The IAS program is readily applicable to mine closure situations, has been used in prior mine closures, and is being used in the pending closure of the Brenda mine. It should continue to be the focus for labour adjustment following a mine closure, with the Province's participation in the process maintained. The program only comes into play, however, if the company involved agrees to enter into an Assessment Incentive Agreement and to share in the costs of committee work under that agreement. **Consideration should be given to making participation in joint adjustment committees mandatory, as is done under legislation in Manitoba, Ontario and Quebec, in the case of a significant closure.** Such a joint adjustment committee would not necessarily have to invoke an Assessment Incentive Agreement, and some mining companies would apparently prefer to deal with the manpower adjustment issues on a one-to-one basis with the work force and union. The parties would, of course, be free to turn to the IAS for assistance.

A second recommendation regarding the IAS process arises from the observation that services under the program have generally only been available to employees of the company proceeding with a closure. Others in service or secondary occupations who could be equally affected by a mine closure have not been offered opportunities to avail themselves of program services. **We have noted that under certain conditions community-wide adjustment committees can be established, however, and believe this option should be given more emphasis. The Province should be urged to join with EIC in funding such community-wide committees to deal with high impact closures.**

With the above recommendations to require joint adjustment committees for significant closures, and to broaden and strengthen the functioning of the IAS program, it is the conclusion of this report that existing programs adequately address the concerns regarding workers affected by a mine closure. Our views in this regard are consistent with those of the Advisory Council on Adjustment, which recently called for strengthening existing programs rather than creating new ones, and emphasizing reintegration into the work force of all workers displaced by economic change of any kind (ref. #1, p. xvii).

Community/Fixed Factor Adjustments

Regardless of how well existing programs extend assistance to people as workers, the greater difficulties that may arise with a significant closure are in the process of adjustment for fixed factors. The report identifies privately held housing and commercial and retail properties as being vulnerable, as are local government investments in fixed infrastructure.

Programs that would attempt to protect the equity of those who have invested in the private sector (housing, commercial/retail) are not recommended. There may, however, be ways in which assistance could be indirectly provided. Treating severance pay as a capital gain, as recommended by the Advisory Council on Adjustment, would provide some assistance to those facing loss in the value of fixed assets as a result of mine closure. **To make assistance of this nature more broadly available, to non-mine workers as well, it is recommended that consideration be given to allowing losses in fixed asset value to be deducted from other income for income tax purposes.**

In the case of local government infrastructure the Province is the ultimate "backstop" in the event that debt cannot be serviced following a mine closure. For established communities this is probably the most appropriate way to cope with such occurrences, and the report does not recommend setting up a special fund for this purpose. It does note, however, that the Ministry of Municipal Affairs, Recreation and Culture could exert a strong screening function in future over debts being incurred for "vulnerable" services, and attempt to ensure that the amortization of any such debt is compatible with expected mine life. It is also noted that the Ministry of Municipal Affairs, Recreation and Culture should, in future, consider requiring mining companies to provide guarantees for *new* local government debt, where such debt must be assumed in order to meet the demand for local services generated by a major mine operation.

The report recommends that a protocol be established between provincial ministries to provide an efficient process to deal with mine closures. The first element of that protocol would call for the Ministry of Energy, Mines and Petroleum Resources to provide early notice of mines that are likely to close. The second element would endorse the important role of Employment and Immigration Canada's Industrial Adjustment Service (IAS) Program in dealing with the labour adjustment aspects of a mine closure, and commit the Ministry of Advanced Education and Job Training to continued participation in that program. The third element would be a "standby agreement" under which the Ministry of Regional Development and the Ministry of Municipal Affairs, Recreation and Culture agree to co-chair a community adjustment committee to deal with the non-labour aspects of a closure. This would call for participation by a number of other provincial ministries, as well as for close liaison with, and involvement of, affected local and regional governments. This committee would also be responsible for coordination with Employment and Immigration Canada's Community Futures Program, where appropriate.

A committee of this type functioned on an ad-hoc basis to deal with the mine closure at Stewart in 1984. **It should work closely with affected local governments and provide a vehicle through which provincial programs can be called upon to fund studies and meet expenses involved in attracting replacement industry to sustain a local or regional economy.** The Ministry of Municipal Affairs Recreation and Culture will play a key role in dealing with local government debt. **It is our view that the Province should accept the responsibility for restructuring debt, and should ensure that a legacy of debt does not, through its impact on property taxes, deter**

new industry from locating in an area that has been adversely affected by a mine closure.

The recommendations for provincial government action to deal with the anticipated major mine closures in British Columbia in the 1990s can be highlighted as:

Assistance for Labour Adjustment

- New programs not required.
    - Short term "safety net" is provided by Unemployment Insurance, related programs.
    - EIC's Industrial Adjustment Service Program provides adequate assistance in relocation of mine employees.
    - The Province should encourage the formation of community-wide adjustment committees to broaden the support available under the IAS Program for high impact closures.
- Because the IAS Program is voluntary, however, consideration might be given to making participation in joint adjustment committees (independently or through the IAS) mandatory in the case of major closures, as is done in Manitoba, Ontario, and Quebec. (A requirement that would logically apply to all industries, not just mining.)

Community/Fixed Factor Adjustment

- Direct programs to protect equity in housing, retail or commercial real estate are not recommended. Some indirect relief under provisions of the Income Tax Act warrants consideration.
- It is appropriate that the Province should continue to "backstop" local government debt, should the ability to service be damaged by a closure. Setting up a special fund for this purpose is not recommended, however.

Process/Protocol for Managing Closures

- Provincial Ministries should establish an efficient process to deal with mine closures:
    - MEMPR to provide early notice of closures.
    - Advanced Education and Job Training to continue with commitment to and participation in EIC's Industrial Adjustment Service Program.

- Municipal Affairs, Recreation and Culture, jointly with Regional Development, to establish and fund community adjustment committees. Involvement of local/regional governments is essential. Regional Development to spearhead efforts to attract replacement industry. MARC to address local services and debt rationalization to ensure tax consequences of debt legacy do not deter new industry.

There are many community specific actions that will have to be considered and dealt with on a case by case basis by all levels of government. However, we feel that the policy and program recommendations set out above will be sufficient for a large majority of the future mine closures in British Columbia.

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APPENDIX 1

This Appendix reproduces the following documents:

1. Industrial Adjustment Service Program (IAS)

   A brief explanation of the IAS Program as administered by the Labour Market Services Branch/Industrial Adjustment Service of Employment and Immigration Canada.

2. Working Opportunities for People, Canadian Jobs Strategy and Other Programs and Services. Employment and Immigration Canada, July 1988.

   A brochure produced by Employment and Immigration Canada to explain the Canadian Jobs Strategy and the integration of programs offered by EIC to enhance the efficiency of Canada's labour market.

3. An Overview of Government Financial Incentive Programs. Prepared by Judy Chisholm, Business Information Officer of the ENTERPRISE INFO CENTRE, 750 Pacific Boulevard South, Vancouver, January 9, 1989.

   This document provides a brief overview, and references for further contact, of the federal and provincial programs available to assist business and individuals in British Columbia.

Employment and Immigration Canada   Emploi et Immigration Canada

Canada Employment and Immigration Commission
Labour Market Services Branch

Industrial Adjustment Service Program (IAS)

The IAS Program administered by the Labour Market Services (LMS) Branch is a service of the Canada Employment and Immigration Commission. It is used as a catalyst to bring employers and workers together to deal with changes in the workplace, by formulating adjustment measures to solve the problems that change can bring, and to monitor and evaluate the implementation of plans jointly developed by employers and their workers.

Through the IAS Program, LMS offers technical advice, guidance and financial incentives wherever there is a technological or economic change with Human Resource implications. Typically program cases may involve plant expansion/contraction, closure or relocation, technological change, industrial slowdown, labour instability, high turnover, absenteeism, job dissatisfaction, mass layoffs, the need for skill training or other factors which might lead to the dislocation of workers.

The IAS program is designed not just for situations that have already occurred but also for situations where changes in human resource systems can be anticipated.

The IAS consultative process involves an Assessment Incentive Agreement which provides for the establishment of a labour-management committee for the development and implementation of private adjustment measures to meet a Human Resource requirement.

This Agreement is signed by the employer, a representative of the employees, the Canada Employment and Immigration Commission and a representative of the Province of B.C.

The Minister of Employment and Immigration Canada, through the IAS Program, provides financial incentives to assist in the implementation of the agreements. The federal contribution is usually 50% of the cost and the balance is usually provided by the company. In some cases, the union and the Province may also contribute to the costs of committee activities.

The Adjustment Committee, formed to achieve the objectives of an Assessment Incentive Agreement, consists of members from the company, employee representatives and an impartial chairperson. It is supported by a representative of the Province and the LMS Consultant who are not members of the Committee, except in an ex-officio capacity.

The IAS Program operates on three general principles:

1. Research and planning well in advance of coming change, to study implications and recommend suitable private and public adjustment measures.

2. A joint approach by management and labour to permit workers to take part in the development of plans that will affect them.

3. The coordination of private and public adjustment measures including the full range of government programs.

While there may be casual industrial relations implications in the consultation process, for example, the recognition of seniority and transfer provisions in a collective agreement, the IAS Program is not used to carry out any industrial relations functions which may interfere with the normal collective bargaining process. The LMS Branch will terminate all discussions with management and labour when an industrial dispute is in progress.

The IAS Program may be applied to a business enterprise, an industry, a non-profit organization, or on a community or regional basis.

For more information, contact your nearest Labour Market Services Consultant at:

Kelowna	763-0796	Victoria	388-3667
Prince George	561-5359	Vancouver	666-8343

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Introduction

Ours is a labour market in transition. This is not a temporary situation but a constant reality that will define our economic future — and the future of all industrialized nations.

The speed of technological evolution and shifting product demands has created a climate of change throughout our labour market. Work patterns, skill demands, training expectations, labour-management relationships — these and other aspects of our working world are undergoing significant change. Adjustment in the Canadian labour market is increasingly widespread, within sectors and by individuals. It is estimated, for instance, that 5.2 million Canadians change jobs annually.

In this environment, it is essential that the federal government respond to, and even anticipate, changing demands. Nowhere are these challenges more directly addressed than in **Employment and Immigration Canada (EIC)**, a department whose mandate touches on employment development, skill training, labour mobility, unemployment insurance, immigrant workers, employment equity, economic diversification and regional disparity.

Through a variety of labour market programs, Employment and Immigration Canada is successfully meeting the challenges of labour market change and adjustment. Central to this success, the **Canadian Jobs Strategy (CJS)** is providing Canadians with a unique and adaptable framework for skill development and meaningful employment.

Launched in September 1985 after consultations with the provinces, business and labour, the Canadian Jobs Strategy offers a variety of program resources to help those individuals, sectors and regions most in need. To accomplish this, it relies on greater co-operation between the private and public sectors to train workers.

Central to all CJS programs is the principle of employment equity. Each of the six programs set "fair" target levels for women, aboriginal peoples, persons with disabilities and visible minorities. Allowances are available for part-time as well as full-time training, and those persons with dependants may receive higher allowances. Some CJS projects are designed specifically for clients with special needs.

Using funding formulated by region instead of by program, different parts of the country are able to emphasize the best mix of training and employment and put it where it is needed most. The result has been a participation rate of more than 400,000 people annually — and these Canadians are reporting that CJS has helped them find new jobs, upgrade their skills in jobs they might otherwise have lost, or better prepare for tomorrow's workforce.

The increased involvement of the private sector in skill training and employment development has been critical not only to the success of CJS but to the significant growth of the economy as a whole.

More than a million jobs have been created in the past three years by the direct and indirect efforts of the government, and the job creation rate is accelerating — 40,000 jobs per month in 1987. Even more important, 85 per cent of these jobs are full time, involving skills relevant to future labour market opportunities.

For individual Canadians, of course, accessibility and responsiveness translate into direct dealings with EIC offices. In this respect, all of EIC's labour market initiatives are focused on **Employment Services**, which administers EIC's points of contact with millions of Canadians. Including Canada Employment Centres, itinerant services, university employment centres, Local Advisory Councils and Outreach projects, there are more that 1,100 of these contact points across Canada. They deliver EIC's wide range of labour adjustment, exchange and information services. Some 27,000 people use these services each day.

In keeping with the department's commitment to respond to changing needs, during the past several years every element of Employment Services has been held up to the light, refined and streamlined to provide the best possible delivery of programs and services to employer and worker clients.

As with the Canadian Jobs Strategy and other elements of EIC's mandate, these changes have not been undertaken in a vacuum. They have been a direct result of consultation and collaboration with businesses, groups and individuals across the country.

An effective national response to changing labour market conditions demands this kind of co-operation, involving all economic partners. Over the past three years, EIC has been instrumental in setting in motion an unprecedented degree of collaboration among all levels of government, community interest groups, educational institutions and the private sector.

As Canada moves to seize the opportunities presented by changing technologies and markets, EIC's **Industrial Adjustment Service (IAS)** will be an important resource, as it has been since 1963. This world-renowned service provides Canadian business and industry with a forum for labour-management expansion, problem-solving and human resource adjustment. In the context of expected labour market growth, the Industrial Adjustment Service will continue to play an important role.

Responding to change is not always easy. But, together with other Canadians, we have put in place a variety of effective and proven tools to help the Canadian labour market seize the opportunities of tomorrow.

Canadian Jobs Strategy

Employment and Immigration Canada launched the **Canadian Jobs Strategy (CJS)** in 1985 to provide workers with the training they'll need for tomorrow's jobs. It was developed after consultations with business, labour and provincial governments, and emphasizes involvement by the private sector at the local level. It is a flexible, varied strategy designed to be used where it is most needed. And it is a strategy that is working – more than 400,000 people are helped each year.

The Canadian Jobs Strategy is not a magic solution to labour market problems. But it does address specific and pressing problems, and it targets assistance to those who are most in need. It does so by applying a mix of tools, or programs, in a uniquely integrated approach. These programs are Skill Investment, Job Entry, Job Development, Skill Shortages, Community Futures and Innovations.

Skill Investment

Rapid technological and economic change has a dramatic impact on the labour force. Workers and employers must be equipped with new skills and adaptable systems of support that enable them to adapt quickly to new developments.

Skill Investment helps employed workers to plan for change. They can train for the future, *before* their existing skills become obsolete.

For individual workers, Skill Investment is a chance to get the skills they need for continued employment. For employers, it's a practical way to avoid laying off adaptable, capable employees during times of change.

Management and labour now have the chance to set their own agenda for training. They can respond to their future skill needs without a major loss of income. As well, it's an opportunity for small business owners, self-employed persons, managers and employees to co-operate for mutual benefit.

On- and off-the-job training can be combined with work experience. Federal funding provides workers and employers with stable financial support for up to three years.

How Skill Investment works

Assistance is available for a wide range of training options, so training plans can be tailored to individual needs and local economic conditions. For example, training can take place in the employee's company, as an internship with another firm, or at a community college. As a rule, employers and individual participants decide on the nature and type of training best suited to the situation. Federal assistance for this training can last up to three years. Several options are available.

The *Retraining* option is designed to assist with the adjustment problems of small business (fewer than 100 employees). Employers receive up to 60 per cent of wages, to a maximum of $7.50 per hour, with a weekly maximum of $300 per participant. Employers also receive up to $20 for each participant training hour. Special costs are also available to assist the physically disabled.

The *Continuing Employment* option assists persons whose employment is threatened, and displaced workers who are in danger of losing or have lost their jobs within the past four months because of market or technological change. New or expanding employers who hire these workers may receive the same financial support as with the Retraining Option.

Training Trust Funds are another option. They are established by employee associations independently or jointly with an employer.

These funds pay for members' future training and skill development, thus encouraging the continuation of existing funds and the creation of new ones.

Relocation and Travel Assistance is available for individuals or groups of workers who are in danger of losing their jobs or have lost their jobs within the last four months because of technological and/or market changes.

Work Sharing enables employers to cope with economic downturns without laying off workers. Employees can temporarily work a reduced work week, draw unemployment insurance benefits for the days not worked, and use their work-sharing days for training.

Skill Shortages

In some areas of Canada, certain high demand skills may be in short supply. For the employer, this shortage may represent a fundamental obstacle to maintaining a competitive operation.

Skill Shortages provides financial assistance, up to three years, for employers to train workers in these needed skills.

How Skill Shortages works

Skill Shortages can be adapted to a wide range of needs. Assistance is available for up to three years for both on- and off-the-job training, full as well as part time. Employers are encouraged to develop their own training plans. They know the skills they need, and they have a direct economic stake in the quality of training provided.

Under the program, employers are partially reimbursed for wages paid to a worker who is being trained. Reimbursements cover up to 60 per cent of wages during off-the-job training and up to 25 per cent during on-the-job training, for a maximum of $7.50 an hour or $300 a week. This funding policy takes into account the lost productivity during off-the-job training and the employee's growing productivity during on-the-job training.

In addition, the program covers part of the employer's eligible training costs for each trainee.

Employers who require special equipment or structural renovations to the workplace to hire persons with disabilities can receive up to $10,000 per participant to defray these costs.

The Relocation and Travel Assistance Option is also available under Skill Shortages.

Community Futures

Major layoffs in single-industry towns can devastate an entire community.

Many of these communities are resource-based, single-industry towns, isolated from larger, more resilient economic regions. In these communities, the unemployment rates can be well above the regional average.

While many of these communities have received assistance from the federal government, too often this help has arrived too late. This is because past approaches have been largely reactive, responding to disaster after the fact and spreading safety nets to pick up the pieces of shattered communities.

Community Futures, however, is geared to anticipate change and to aid development while the potential for recovery still exists. Community Futures helps communities hit by mass layoffs and plant closures, but it does more. It also helps communities faced with chronic unemployment, communities which are struggling with economic decline but which have some permanent growth and opportunities for development.

How Community Futures works

Community Futures builds on the existing strengths of the communities, providing support to the private sector and local community initiatives. It involves a flexible, co-operative approach. It emphasizes entrepreneurial development by helping to set up small businesses or enlarge existing ones.

Community Futures addresses real needs by responding to initiatives proposed by the communities themselves through committees of local people. The job of these committees is to evaluate community potential, so that measures can be taken to diversify the local economy and thus create new opportunities, new jobs.

The Community Futures Committee can choose from the following program options:

- *Business Development Centres*, which provide locally managed technical and advisory services to small business as well as loan investment assistance of up to $75,000 per firm from a $1.5 million investment fund;
- *Self-Employment Incentives*, which provide $180 a week for one year to enable unemployed individuals to start their own business;
- *Training Assistance* for the purchase of courses in approved institutions for training the employed, self-employed, or unemployed;
- *Relocation and Travel Assistance* for individuals or groups of workers to move to jobs elsewhere; and
- *Community Initiative Fund*, which will match funds from other sources for local projects designed to generate new permanent jobs.

Program options are available to selected Community Futures communities for up to five years.

Innovations

Innovations looks to the future. It acts as a catalyst to tap the creative resources — stimulating new and imaginative initiatives to improve the functioning of Canada's labour market.

Innovations is unique in that it assists pilot and demonstration projects which test new and cost-effective solutions to labour market problems.

Proposals may suggest the testing of solutions to any labour market issue or problem. These could include the following examples:

- testing alternative methods of counselling, networking, placement and/or training, to facilitate the entry or re-entry of people with special needs into stable employment;
- investigating new ways to make the best use of the available human resources in a business, community or sector;
- developing new methods for training or retraining people who are unemployed or whose jobs are threatened, or helping workers adapt to technological change;
- evaluating alternative patterns of workplace and worktime arrangements, such as work sharing, working from the home, etc.

How Innovations works

Participation in the program is open to individuals, groups, businesses, unions, educators and other organizations anywhere in Canada.

Proposals may address labour market concerns that are local or national in scope. Proposals should show potential for generating lasting improvements in the labour market by being transferable to the broader labour market.

Financial assistance is available for sharing the cost of projects with sponsors and/or other sources of funding, including other levels of government and private sector organizations.

There are two overriding qualifications:

- it must be a new approach to generating significant improvements in the labour market; and
- it must build in an explanatory evaluation of the project.

Job Entry

The unemployment rate for high school dropouts is almost 30 per cent. Altogether, including those who have not completed secondary or post-secondary education, there are more than 400,000 young people who are attempting to break into the workforce.

A similar challenge faces many of the 200,000 women who annually re-enter the work force after working for several years in the home. Some of them are unsure of themselves, underestimate their abilities or feel intimidated by employers looking for relevant work experience.

As well, there are other individuals who are severely employment-disadvantaged because of little or no education, or who cannot obtain a job because of social or economic barriers.

To acquire skills and experience and to become active members of the labour force, these groups require an integrated program of training and work experience. **Job Entry** is such a program.

The *Entry* option helps young people and the *Re-entry* option helps women to make this sometimes difficult transition into the labour market. With a combination of up to 52 weeks of skills training and practical work experience, Job Entry provides for individual needs, while at the same time addressing local labour market requirements.

It also offers unique opportunities for the business and voluntary sectors to ensure that specific training projects relate to real labour market needs and that the skills provided are meaningful for women and youth.

How Job Entry works

The pivotal point in a Job Entry project is the co-ordinator who designs training plans, recruits and assesses participants, places them with training place hosts, and arranges off-site training courses. Businesses, organizations, public health and educational institutions, municipal governments and Indian band councils can act as coordinators.

On-site training and work experience for young people and women is provided. Participants benefit from a realistic allowance schedule that can include supplementary allowances for dependant care, commuting expenses or the cost of living away from home.

CJS also recognizes the need to ensure that young people still in the educational system are exposed to the labour market and to actual work experience. Job Entry's flexibility enables the program to support educational institutions' work/study programs, which will later help graduates to make a smoother transition to the labour market. Similarly, students who take part in *Challenge*, the government-sponsored summer job program, can benefit from the career-related work experience provided through shorter-term employment projects with private sector, municipal and non-profit employers.

Projects for the *Severely Employment-Disadvantaged* are provided through Job Entry. A severely employment-disadvantaged person is one who has had difficulty getting and keeping jobs due to problematic work habits and attitudes, lack of motivation, a serious lack of education or training, prolonged periods of institutionalization, functional illiteracy or a long history of drug or alcohol abuse. These projects would include employment preparation and guidance to help individuals become ready for work.

Job Development

Long-term unemployment has traditionally been a problem in the Canadian labour market. **Job Development** was designed to enhance the employability of the long-term unemployed through work experience and skills training.

Job Development focuses on individual needs and improved permanent employment prospects in the context of local economic growth and potential. The goal of Job Development is to contribute relevant skills to the workforce.

Job Development helps people who are most in need — generally those out of work for 24 out of the last 30 weeks. It offers employers a wage subsidy to hire and train the workers they need to meet the changing demands of the marketplace. Businesses, organizations, public health and educational institutions, municipal governments and Indian band councils can act as employers.

How Job Development works

Job Development projects and individually subsidized jobs, lasting up to 52 weeks, combine on-site training with an employer and off-site training as required. Canada Employment Centre counsellors assess the need for individual training or job experience, and place people in projects which best suit these needs.

Eligible project employers can receive wage subsidies and direct financial contributions towards capital costs and training. Those who require special equipment or structural renovations to the workplace to hire disabled persons can receive up to $10,000 per participant to defray these costs.

To cover direct training costs at community colleges or other recognized training centres, employers can receive up to $8.00 per hour per participant. In addition, employers can receive a contribution towards mandatory employment-related costs (for example, the employer's share of unemployment insurance, Canada/Quebec Pension Plan provisions, workers' compensation, vacation pay, payroll taxes, health insurance and overhead costs).

UI Job Creation — Section 38

UI Job Creation is another measure available to assist businesses and organizations to initiate and complete projects by providing opportunities for UI claimants to maintain their work skills. Projects must create at least three new jobs, last between six and 52 weeks, and not displace any existing employees or volunteers. Projects should have objectives which can be completed in a specific time frame.

Employment Services

Serving workers and employers

Canada's national **Employment Services** make up a far-reaching and dynamic network of activities serving the country's employers and workers.

EIC, through its 1,100 points of service, works with all facets of the Canadian labour market at the local, regional and national level.

Our goal is to make a difference in the job market — to make things happen for worker and employer clients that would not happen without our involvement. At the same time, we are improving the quality of service of our operations. By managing our resources carefully, we are ensuring that we receive the greatest value without sacrificing service.

Labour market adjustment services

A full range of labour market adjustment services is available to worker and employer clients who need them.

Counselling for worker clients

Training courses for our counsellors and an increased emphasis on human resource development have improved the quality of counselling available to worker clients.

Counsellors help clients identify and discuss employment concerns. Together they establish realistic and specific employment goals and ways of achieving them. Counselling can cover such topics as learning self-management and making difficult decisions to change work behaviour.

Counsellors use such tools as testing and **CHOICES** (a computer-assisted program available in some CECs) to help clients choose a career. They may also refer clients to training programs.

Outreach services

Some clients may be referred to **Outreach** projects. Funded by EIC and operated by community agencies, almost 300 Outreach projects across the country provide in-depth career counselling and employment services for people who have difficulty finding and keeping jobs. Clients may also be referred to other community agencies.

Helping agriculture

For many years EIC has offered assistance tailored to the needs of the agricultural sector. Through its **Agricultural Employment Services (AES)** offices, it has given human resource planning assistance to employers. In addition, it serves agricultural communities by determining local farm labour force requirements.

A more recent form of assistance is offered by the **Canadian Rural Transition Program (CRTP)**. It was created in 1986 to help people who, for financial reasons, must cease farming.

The main thrust of the program is to provide assistance to those families forced to give up farming and who must move to alternative employment or another way of life.

Assistance includes employment and related personal counselling; various forms of financial assistance for relocation, training, travel and income support if a new business is established; as well as incentives to employers to hire farm family members.

Quality of service

CECs are changing and our clients have already begun to experience the improvements. These changes, and those to come, reflect our continuing commitment to provide quality service. They also reflect our awareness that employment needs vary from client to client and that we must provide service appropriate to each individual.

CECs are available to serve everyone. Because of fiscal restraints, however, our energies are focused on the worker and employer clients who need us most. For clients who can serve themselves, we offer a number of self-help aids to make their task easier. Those who may be better served by another agency are referred elsewhere. Our role is to complement, not duplicate services offered by others.

Assistance for employer clients

CECs help employer clients with their human resource management planning. In addition, many CECs periodically conduct local employer seminars where a variety of topics of interest to employers are examined.

Large employers generally look after their own hiring needs. But CECs are happy to post their orders in the Job Information Centre.

Most employers, however, have fewer than 100 employees and rely on their local CEC. That's why each office has a *Small Business Co-ordinator*.

Matching workers and employers

Most worker clients can conduct their own job searches. Each CEC has a **Job Information Centre (JIC)** to help them conduct that search.

JICs contain many sources of jobs. One is the job boards, which list all job orders received at the CEC. Another source, the National Job Bank, is available to people looking for employment opportunities across Canada.

Other sources where jobs can be listed, depending on the size of the JIC, include electronic message boards, audio-visual presentations, posters and publications.

Many CECs also have arrangements with local television and radio stations to broadcast, at no charge, information on available jobs and other employment-related subjects.

Worker clients can also attend group sessions at their CEC to get tips on writing a resume and preparing for a job interview as well as information on employment programs and services.

Labour market information

Worker and employer clients can also receive information on other subjects, including places where there is a shortage of workers; where jobs in a specific occupation are available; the training and entry requirements for almost any occupation; names, addresses and hours of work of major employers in the area; and employment training and services available locally.

Adjusting to Change

In today's evolving economy, workers and employers are often affected by the same technological and market changes.

A practical, co-operative approach is needed if workers and employers are to survive and prosper. The **Industrial Adjustment Service (IAS)** provides a forum for employers and employees to get together to respond to these challenges.

Established in 1963, IAS has a proven track record of helping people deal with plant closures, technological and market changes, and the threat of layoffs. It provides for the voluntary establishment of Joint Consultative Committees — comprising employees and employers — to work out solutions to these mutual problems.

How IAS is applied

Businesses facing unexpected changes in the economy find that IAS can be an ideal way to restructure their enterprises. Joint management and labour co-operation is essential to ensure that the transition can be as orderly as possible.

The program's main focus is to help a firm or enterprise adapt to changing demand and supply conditions in the labour market. The IAS program usually applies in circumstances involving plant closures, threat of layoff, plant expansion, technological change, high labour turnover and the transfer of workers.

Once an IAS agreement is signed, the employer and employees or their associations select representatives for a Joint Consultative Committee. Labour and management are equally represented. The committee appoints an impartial chairperson, often a consultant knowledgeable about business and people. The committee then develops and carries out an action plan to deal with a specific labour market issue.

An IAS representative from EIC acts as a resource person for the committee. Most IAS officers have experience in the private sector. They know how to cut through the red tape to help the committee gain access to a wide range of government programs and services.

Fast response

You can get information on the IAS by phoning your regional EIC office. In urgent cases, a consultant can be on the scene within a day, and a formal IAS agreement signed within a week. However, the best time to call is before events reach a crisis stage.

Who can participate

Most IAS business is with individual firms. But IAS can also deal with entire industrial sectors at either the national or regional level. Committees representing communities may also be organized with representation from several business and labour groups.

The process is voluntary. Employers and employees must agree to participate. Employee representatives may be elected by their union or staff association.

Sharing the costs

Usually the business and EIC share the committee's costs. These can include the chairperson's fees, employees' wages during committee meetings, administrative support and, most importantly, the costs of consultants or researchers. Sometimes the provincial or territorial government can participate in the cost-sharing. EIC can assume all the costs in the case of bankrupt firms or certain community-wide IAS committees.

Employment Equity

The Government of Canada is committed to achieving employment equity for women, aboriginal peoples, persons with disabilities and visible minorities.

We are determined to ensure everyone a fair chance in the workplace and to help employers and workers in their efforts to achieve a truly representative labour force. Employers are encouraged to examine their employment policies and practices so that no person is denied employment or benefits for reasons unrelated to ability. Workers belonging to any of the four groups mentioned above — groups designated in the Employment Equity Act — are counted among those workers who need our services most.

The **Legislated Employment Equity Program** and the **Federal Contractors Program** are major steps towards achieving employment equity.

The Legislated Employment Equity Program is based on the Employment Equity Act. It applies to Crown corporations and to federally regulated employers with 100 employees or more, primarily the banking, transportation and communications industries.

Affected employers are required to implement employment equity and submit annual reports which show the resulting representation of members of the four designated groups in specific salary ranges, occupational groups, hirings, promotions and terminations.

These reports will be made available to the public and to the Canadian Human Rights Commission, which has the authority to initiate an investigation if it has reasonable grounds to believe that systemic discrimination is being practised.

The Federal Contractors Program is designed to ensure that companies that do business with the Government of Canada achieve and maintain a representative workforce.

Companies that employ 100 persons or more and who wish to bid on contracts of $200,000 or more to supply goods and services to the federal government, are required to commit themselves to implementing employment equity as a condition of their bid.

Experienced consultants are available in every region to help employers carry out employment equity planning. A number of other services, including seminars, technical information and publications, are also available.

Local Advisory Councils

CECs have always had strong ties with the communities they serve. These ties are now stronger than ever because of a new emphasis on the importance of local planning.

As with many of its other labour market initiatives, EIC makes every effort to involve all segments of the community in the planning process. This is illustrated by the more than 150 **Local Advisory Councils (LACs)**, which have been established since the Canadian Jobs Strategy was introduced in 1985.

Increasingly, CECs rely on the councils for information on local labour market conditions and for advice on how to better serve the local business community. This advice enables the CEC manager to ensure that programs and services are appropriate to the needs of the local labour market.

The composition of the councils is a reliable barometer of the kind of advice they pass on to local managers. Council members include MPs, local business and labour leaders, community group representatives and members of local organizations representing women, youth, workers with disabilities and visible minorities.

The council's advice does not stop at the local level. They also advise the Minister on the impact of policies in their communities.

The more than 150 councils cover most major labour markets. Where no council exists, CEC managers and staff consult on a regular basis with community representatives.

The local planning capability of the councils is helping to make CECs much more responsive to labour market needs than ever before. Once again, this underlines EIC's ability to adjust labour market initiatives to suit changing conditions.

Ready for Tomorrow

The programs Employment and Immigration Canada has established, in consultation with Canadians from coast to coast, mean that Canada can face the challenge of future change with confidence. These programs and initiatives are all designed with one aim in mind: to allow Canadians to control labour market change instead of being controlled by it.

The government is determined that the level of co-operation that has characterized the development of these programs continues in the months and years ahead. Collaboration among all Canadians is essential if our responses to change are to remain relevant and if our human resources are to be fully realized.

The potential for our human resources in emerging skill and trade opportunities only underscores the need to maintain focused and adaptable labour market strategies. Employment and Immigration Canada, through the Canadian Jobs Strategy and its other labour market initiatives, is committed to helping Canada move confidently into a future of unprecedented labour market growth.

AN OVERVIEW OF GOVERNMENT FINANCIAL INCENTIVE PROGRAMS

* Revised January 09, 1989

This overview was prepared to provide business people with a quick reference to programs and services available from both the Federal and Provincial Governments.

The programs listed are those most commonly used by business and we hope it will be a useful tool. As new programs are introduced and existing ones expire, we will periodically provide updates.

This publication is intended as a guideline only. To be assured of the most up-to-date and in-depth information please contact the appropriate Program Administrator.

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Honourable John Jansen
Minister of International Business and Immigration

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AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Assistance Grants for Applied Research (AGAR)	To deliver to the market place new systems or products, or improvements to existing products or processes, for the social and economic development of B.C.	The bi-annual competition, provides approximately 50-75% of the project cost with an average range of $10,000 to $100,000 per year. Grants are renewable each year upon re-application to a maximum total of 3 years. Deadlines for applications are May 1 and Nov 1.	The Science Council of B.C. Vancouver (604) 438-2752
Defence Industry Productivity Program	To enhance economic growth through the promotion of viable defence related exports.	Contributions up to 50% of eligible costs, and repayable loans. Assistance may cover the development of products, the acquisition of modern machine tools and other advanced manufacturing equipment to meet exacting military standards.	Industry Science and Technology (604) 666-2255 Toll free: 1-800-663-0433

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Discovery Foundation	To accelerate the commercialization of advanced technology in British Columbia.	(A) Discovery Innovation Centre -The centre provides a confidential service to innovators, entrepreneurs and companies who wish to explore the commercial potential of their innovations.	Discovery Innovation (604) 684-0647 Toll free 1-800-972-2255
		(B) Discovery Enterprises Inc.- provides venture capital to commercially viable technological innovators with commercially viable products in advanced stages of development.	Discovery Enterprises Inc. (604) 430-3533
		(C) Discovery Parks Inc. - provides premises for innovation oriented enterprises adjacent to research and development facilities. - provides access to government industry and other support services.	Discovery Parks Inc. (604) 430-3533

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Food Industry Development Program	To encourage the increased use of B.C. produce and food in the food service industry and to assist in the development and expansion of the processing sector of the B.C. food industry.	A grant not to exceed 50% of eligible costs to a maximum of $50,000. The 3 categories to be considered are: 1) Food Product and Market Development. 2) New Processing Technology Development 3) Productivity Advisory Services.	Ministry of Agriculture and Fisheries, Victoria (604) 356-1652
Graduate Research, Engineering and Technology Program (G.R.E.A.T.)	To promote collaboration between B.C. industries & B.C. universities by providing graduate student school scholarships.	The scholarship, provided by the Science Council of B.C., provides $14,000 per year for a maximum of 2 years for Masters students for 4 years for PH.D. students.	The Science Council of B.C. Vancouver (604) 438-2752
Industrial Post-Doctoral Fellowship	To encourage industry and business to hire recent PH.D. graduates of Sciences and Engineering.	Subsidized salary costs at a rate of $25,000 renewable for a second year upon re-application.	The Science Council of B.C. Vancouver (604) 438-2752

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Industrial Research Assistance Program (I.R.A.P.)	I.R.A.P.- C- Field Advisory Service	Provides contact with National Research Council industrial development services.	All I.R.A.P. Programs National Research Council (604) 666-7244
	I.R.A.P.- H - Contributions to firms employing under-graduates	Pays 85% of students salaries for a period of 4 months depending on student qualifications.	See above
	I.R.A. Contri invest - To a manufa solve engine technological problems by providing access to expertise available in institutes, laboratories, or consulting firms.	65% of the authorized total cost, to a maximum support level of $5,000.	See above

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Industrial Research Assistance Program (I.R.A.P.) (Continued)	I.R.A.P. - M Contributions to small projects Encourages small companies, with limited or no technical staff, to solve specific technical problems with their own staff and/or with the aid of external facilities in a selected research organization.	Direct salary costs up to $100,000 for generally a maximum period of twelve months.	National Research Council (604) 666-7244
	I.R.A.P. - R - Provides technical and financial assistance for R & D and pre-project market studies for Canadian companies.	Funding up to 50% of costs to Canadian companies to undertake a project to exploit technology and resources developed in federal or provincial government laboratories and Canadian universities or assist in the transfer and adaptation of foreign technologies.	National Research Council (604) 666-7244

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Science and Technology Development Fund	To stimulate the development of science and technology applicable to economic development of B.C. involving new products and technology, human resources, technology transfer and targeted research and development.	Depending on which component is applied for, grants are available at either 50% or 100% level of total cost.	Ministry of Advance Education and Job Training Science and Technology Branch Program Program Administrator Victoria, B.C. (604) 387-0100
Canadian Agricultural Market Development Initiative (CAMDI)	To promote the increased volume or value of Canadian food and agricultural products in domestic and foreign markets, and to encourage cost saving and other improvements to agricultural and food marketing systems.	Funding may be provided of up to 50% of eligible project costs, to a maximum of $250,000 annually. Categories of activity include: -Market research and development -Product development -Market information	Agriculture Development Branch Agriculture Canada Rm. 307, 80-6th Street New Westminster, B.C. V3L 5B3 (613) 666-6344

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Institutional Support Program	To assist traditional industries to improve productivity and competitiveness by encouraging adaptation of emerging technology.	Contributions towards acquisition of equipment by independent research institutions.	Ministry of Regional Development Victoria (604) 387-5018
Mineral Opportunities Program	To expand, and make available, geoscientific technical and market data.	Cost sharing on market, technical, and feasibility studies.	Ministry of Energy, Mines Petroleum Resources Victoria (604) 356-2855
Natural Sciences and Engineering Research Council - Canada	Promote collaboration between University research and Canadian industry.	Various cost sharing programs to hire research personnel and utilize research facilities.	National Research Council Contact: (604) 224-4331
Program for Industry/Laboratory Projects (FILE)	To provide private companies access to new ideas, inventions and technical knowledge which has been developed in government sponsored laboratories. The companies may then develop and market these products.	1) Licencee agreements to allow exploration of new technologies. 2) Financial support for product development and market research	National Research Council Vancouver (604) 666-7244

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

RESEARCH & DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Technology Assistance Program	To assist small and medium sized companies to do research using B.C. Research facilities.	50% of contribution on first $10,000; 1/3 on next $10,000 and 25% over $20,000 to a maximum contribution of $20,000.	B.C. Research Vancouver (604) 224-4331
Tech Prog	To promote international collaboration that will provide technological innovations to develop new or improved Canadian products, processes or services.	Offers services of Canadian government offices abroad to facilitate flow of foreign technology to Canada. Provides various kinds of financial support to assist Canadians to gain first hand knowledge of foreign technologies.	National Research Council Vancouver (604) 666-7244
Tourism-International Market Development	Develop international marketing programs for B.C. tourism facilities and to develop new tour packages.	50% cost sharing with private tourism operators or consortiums.	Industry, Science and Technology (604) 666-1432 Toll Free 1-800-663-0433
Tourism Industry Support Program	To conduct major research activities of broad interest to the industry and to conduct specific opportunity identification research.	Contributions to B.C. Tourist associations.	Ministry of Tourism and Provincial Secretary Victoria (604) 387-1533

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Assistance to Associations Program	To aid business, trade and industry associations in providing management development opportunities to its members.	50% costs up to a maximum of $2,500 per year.	Ministry of Regional Development Vancouver Contact: Jerry Uretsky (604) 660-3900 Toll Free: 1-800-972-2255
S.F.U. Business Co-Op Program	To provide business students with work experience in a business environment.	50% of the Co-Op student's salary is paid, up to a max. subsidy of $700 per month. Applicants may be businesses or non-profit organizations have fewer than 200 employees and be a first time employer of the student. Subsidy paid monthly to employer.	The Co-ordinator Co-operative Education Faculty of Business Administration Simon Fraser University Burnaby, B.C., V5A 1S6 (604) 291-3619

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	
Enterprise Centres	To provide businesses and potential businesses access to carefully chosen items of business information, consumer contacts, business education material, business management [illegible] tapes, [illegible] iles.	Local Chamber of Commerce, Economic Development Commissions, and other agencies such as community colleges throughout British Columbia operate a network of information centres linked directly into the Info Business Centre in Vancouver by telephone and computer. These centres act as the local contact point for business literature, information, and advice. Some centres may provide counselling.	For information on locations contact Info Business Centre, Vancouver (604) 660-3900 Toll Free: 1-800-972-2255

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Federal Business Development Bank	To enhance management skills.	Professionally presented seminars at various locations throughout the province - costs vary with length of seminar.	Federal Business Developmen Bank Vancouver Contact: (604) 666-7850 or local branch
FBDB Do-It-Yourself kits	To enhance management skills.	Publications and materials providing self directed instruction - cost varies with subject.	Federal Business Developmen Bank Vancouver Contact: (604) 666-7850 or local branch
Canadian Business Initiative Programme	-To identify small business owner/managers needs in the areas of training and counselling; -To design and provide relevant group workshops; -To provide individual advisory assistance for analysis and implementation of new ideas; -To assist participants in problem solving;	Enrolls some 30-32 non-competitive owners/managers for guidance by a team of experienced resource persons at a cost of $3,000 per business for 12 months. (some 75% of the cost is rebated to the clients, federally through Employment and Immigration Canada).	Federal Business Developmen Bank Vancouver - Contact John Noonan (604) 666-7875 or your local FBDB Branch

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Canadian Business Initiative Programme (continued)	-To assist participants in achieving business goals, such as increasing market share and/or employment; -To encourage development, analysis and use of business records and other management tools as a means of minimizing business failure; -To accelerate business development by introducing to small business owners/managers new or more up-to-date management techniques.	Provides group learning opportunities, individual guidance and mentoring, supported by current information & planning.	Federal Business Development Bank Vancouver - Contact John Noonan (604) 666-3875
Canadian Jobs Strategy - Skill Investment	Provides employers and employees the chance to adapt to changing technological and competitive conditions which threaten job security.	Wage subsidies and reimbursement of training costs for up to 3 years.	Employment and Immigration Canada Contact: Local Canada Employment Centre
- Skill Shortages	To assist employers to develop and provide training for their employees.	25-60% of wages to a maximum of $300/week plus training costs.	Employment and Immigration Canada Contact: Local Canada Employment Centre

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Canadian Jobs Strategy (continued) - Job Development	To provide training and job opportunities with lasting benefits for those who have been essentially jobless for 6 months.	Funds may be paid towards a variety of costs, including wages and training expenses for participants and the installation of special facilities for disabled workers.	Employment and Immigration Canada Contact: Local Canada Employment Centre
- Job Entry	To assist individuals experiencing difficulty in making the transition from school to work and women entering or re-entering the work force.	Participants receive a grant training allowance.	Employment and Immigration Canada Contact: Local Canada Employment Centre
- Community Futures	To provide communities, faced with major layoffs and chronic unemployment, with support for local participators in assessment of its economic needs and the development of economic and employment opportunities in 25 communities.	Funding of an economic assessment community leading to: 1. Grants to individuals to provide living expenses while establishing a business.	Employment Canada Futures Branch (604) 666-5515

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Canadian Jobs Strategy (continued)		⋮ 2. Business Development Centres which may provide technical assistance and/or loans to businesses.	Employment Canada Futures Branch (604) 666-5515
Business Information Center Program	To supply basic information to the small business community and to provide a first point of access to assistance programs and services available from government agencies.	In cooperation with local Chambers of Commerce, Business Information Centres have been established in 84 Chamber offices in communities through out the province. The local manager is trained as a Business Information Officer and is supplied with an information manual and stocks of publications and other materials produced by various government agencies.	Ministry of Regional Economic Development Vancouver (604) 660-3900 Contact: Jerry Uretsky

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
New Exporters to Border States (NEBS)	To promote export marketing skills among B.C. companies to develop new markets within the United States.	A one day seminar to Seattle involving introduction to the export process.	Ministry of International Business & Immigration NEBS Contact: Vancouver (604) 660-4567 Toll Free: 1-800-972-2255
Employment Plus Employment Opportunity Programs	Provides employers with financial incentives to hire and train income assistance recipients.	50% of wage to a maximum limit of $3.50 per hour for up to six months.	Ministry of Social Services and Housing Contact: Ministry of Social Services and Housing district office
Training Opportunities Program	To enable employers to create job opportunities for prospective employees in the following areas: - Disabled - Post secondary school graduates who are seeking to up-grade their skills. - People displaced and unemployed due to technology. - Women seeking training in non-traditional jobs.	50% up to a maximum limit of $3.00 per hour for 4 months.	Ministry of Advanced Education and Job Training in your community or:

TRAINING/MANAGEMENT DEVELOPMENT

Program or Service	Purpose	Form of Assistance	Program Administrator
Tourism Industry Support Program	To aid industry associations in the development and production of manpower and management training materials.	Up to 100% of costs to recognized B.C. tourism associations.	Ministry of Tourism, Recreation and Culture (604) 387-1533
Training Program for Disabled	To provide disabled persons with training, retraining, or upgrading which wi in secur in their occupati opportur job trai eligible program, person r ve client al Rehabil .	50% of wage plus cost of work site modifications to facilitate employment, maximum $3,000.	Ministry of Advanced Education & Job Training in your Community

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
British Columbia Film	To enhance the diversification and expansion of the motion picture industry of British Columbia by supporting the following areas: - script development - pre-production - production - promotion and distribution - non-theatrical production - professional internships	Low interest loans and/or equity investments.	B.C. Film Vancouver (604) 684-3323
Business Improvement Loans (BIL)	To assist small businesses in the purchase, installation, renovation or improvement of equipment, usually fixed equipment. Includes renovation of premises, leasehold improvements, purchase of land, construction and purchase of premises.	Provides up to 90% of land or premises costs, or up to 80% of equipment cost to a maximum of $100,000, BIL interest rates are a maximum of prime plus 1%. The lender may levy an additional front end fee.	Administered through Chartered banks, trust companies and credit unions

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Defence Industry Productivity Program	See listing under "Research & Development".		
Downtown Revitalization Program	To foster joint efforts by merchants, council and the province toward the physical and promotional presence of downtown areas.	Start-up grants, capital works loans, facade improvement grants and business improvement area grants.	Ministry of Municipal Affairs Victoria (604) 387-4090
Federal Business Development Bank	Provi Canad where avail : sourc able terms . Other de expor strat	Term loans at fixed or variable rates of interest.	Federal Business Development Bank Vancouver Contact: (604) 666-7800 or local branch
FBDB - Matchmaking	To match investment capital from the private sector with appropriate investment opportunities.	Provides a mechanism whereby investors and businesses seeking equity capital can be introduced - registration fee and percentage fee based on size of transaction.	Same as above.

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Canada Opportunities Investment Network (C.O.I.N.)	To address the recognized difficulties encountered by small and emerging entrepreneurs in arranging start-up financing.	Provides access ($50,000-$500,000) on a guaranteed, confidential basis to a three-stage computerized matching process. It culminates in a direct exchange between investors and entrepreneurs registered with the service. Charges are Investors - $250, Entrepreneurs - $150.	B.C. Chamber of Commerce (604) 683-0700
Industrial Development Assistance Program (IDAP)	This program was replaced in December 1988 by the "Small Business Incentive Program", a comprehensive program under the amended "SBISA Agreement", intended to encourage the establishment, modernization or expansion of firms engaged in manufacturing, processing, aquaculture and advanced technology in British Columbia. See "Small Business Incentive Program" on page 26.		B.C. Enterprise Corporation Contact Duty Call Officer (604) 689-8411 Other B.C. 1-800-663-0733

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Industrial Diversification Program	To encourage companies to undertake projects that use advanced technology and that are in industry sectors counter-cyclical to B.C.'s traditional resource-based industries.	Provides contributions of up to 30% of eligible capital costs and/or loans up to 50% of eligible capital costs. Minimum project size is $2 million.	Western Diversification Office (604) 666-6256 Ministry of International Business and Immigration Victoria Contact: (604) 387-5018
Communi (former Corpora	To provide financial assistance to small business through locally controlled lending organizations.	Repayable interest earning loans up to $75,000. (N.B. - not available in all areas of province)	Canada Employment and Immigration Commission nearest office
Mine De	To provide infrastructure to the development of the province's more remote and potentially valuable ore bodies.	Grants up to 50% of cost of environmental studies and engineering designs.	Ministry of Energy, Mine and Petroleum Resources Victoria (604) 387-5178
Mineral Exploration Program (F.A.M.E.)	To assist prospectors and exploration companies in discovering mineral deposits and to extend the economic life of existing mines.	Prospectors Assistance Grants up to $5,000 for prospecting, travel, equipment rental and daily allowances.	Ministry of Energy, Mines, and Petroleum Resources Mineral Resources Division (604) 387-3787

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Regional Seed Capital Program	To encourage financial institutions to lend money to viable small businesses.	Loan guarantees to financial institutions not to exceed 75% of the total loan amount and no single guarantee will exceed $50,000.	Offices of the Ministry of State in your community and/or Victoria (604) 387-5018
Resource Economic Employment Development (REED)	Provides a source of financing for the development of viable economic and employment opportunities for Indian people.	- Loans available for working capital and fixed assets. - Contribution for infrastructure, economic planning, support services, start-up costs and equity. - guarantees for loans made by chartered banks, trust companies and credit unions. - Management Advisory Services to new businesses, pre-loan counselling, staff training, and accounting systems.	Department of Indian Northern Affairs in you community (604) 666-3779

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Resource Industry Modernization Program	To assist existing manufacturing and processing companies in the resource sector, primarily forest products, to modernize operations by acquiring advanced technology.	Provides repayable contributions for up to 30% of capital costs. Minimum project size is $2 million.	Western Diversification Office (604) 666-6256
Resource Industry Value - Added Prog	: new and companies to specialty based on B.C.'s resources, or to under-exploited s, with focus on st products	Provides loans for up to 50% of capital costs.	Ministry of Regional Development Business Finance Branch L. Vincent - (604) 387-0315 Department of Western Economic Diversification Vancouver (604) 666-2255 or 666-6256, Other B.C., Toll Free: 1-800-663-0433
Small Business Ver Capital Program	rage private sector investment in selected economic sectors, eg. manufacturing and processing, research and development, tourist resorts, aquaculture, oceanography, feature film development, master audio tape production, and book publishing.	Tax credits equal to 30% of investment in a venture capital corporation.	Ministry of Regional Development Contact: Equity Programs Branch Victoria (604) 387-0225 Vancouver (604) 660-4188 Toll Free: 1-800-972-2255

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Small Manufacturers' Incentive Program	This program was replaced in December 1988 by the "Small Business Incentive Program", a comprehensive program under the amended "SBISA Agreement", intended to encourage the establishment, modernization or expansion of firms engaged in manufacturing, processing, aquaculture and advanced technology in British Columbia. See "Small Business Incentive Program" on page 26.		Ministry of Regional Development Vancouver Contact: (604)660-3900 Toll Free: 1-800-972-2255
Tourism - Product Development	Development of destination resorts, events and attractions	Low interest loans - project must be part of a destination resort.	Ministry of Regional Development Victoria (604) 387-5018
Western Economic Development	To encourage companies to establish or expand facilities which are of strategic importance to B.C.	Assistance will be provided on the basis its individual merits and the nature of the support required. Normally, funding will be in the form of contributions.	Western Diversification Office Vancouver (604) 666-6256
Aquaculture Incentive Program (AIP)	This program was replaced in December 1988 by the "Small Business Incentive Program", a comprehensive program under the amended "SBISA Agreement", intended to encourage the establishment, modernization or expansion of firms engaged in manufacturing, processing, aquaculture and advanced technology in British Columbia. See "Small Business Incentive Program" on page 26.		Ministry of Regional Development Vancouver - Contact (604) 660-3900 Toll Free: 1-800-972-2255

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

CAPITAL COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Venturenet/Matching Services	To facilitate the financial matching of entrepreneurs seeking capital investment with investors searching for equity investment opportunities.	Investment opportunity is listed/described on a computer database available to interested parties via the B.C. Business Network and the province's overseas trade offices.	Ministry of Regional Development Equity Programs Branch Contact: Victoria (604) 387-0225 Vancouver (604) 660-4080 Toll Free 1-800-972-2255
Small Business Incentive Program (SBIP)	To assis medium es in B.C. moderni order t employm es and to s economi	May be used to fund up to 50% of capital costs, to a maximum of $500,000 for a term of 5 years, for eligible projects not exceeding $2 Million.	Ministry of Regional Development Business Finance Branch Contact: Victoria (604) 387-0225 Vancouver (604) 660-4188 Toll Free 1-800-972-2255

Sectors: Manufacturing
Processing
AquaclUture
Advanced Technology

Note: This program combines the best elements of the four programs previously known as Aquaculture Incentive Program (AIP), Low Interest Loan Program (LILA), Small Manufacturers Incentive Program (SMIP), and Industrial Development Assistance Program (IDAP).

OPERATING COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Agri-Food Regional Development Program	To contribute to the improvement of the competitiveness of the commercial agriculture and food industry in B.C. by enhancing productivity.	Direct contributions ranging from 33% to 100% of project costs in the three categories. a) Productivity Enhancement - up to 100% - $150,000 maximum. b) Resource Development - up to 75% - maximum amounts vary with sub-programs. c) Commodity Development - up to 33 1/3% - maximum vary with sub-programs.	Ministry of Agriculture Fisheries ARDA Branch Victoria (604) 356-1825
Canadian Jobs Strategy	See listing under "Training/Management" See also "Community Futures" under "Capital Costs"		

AN OVERVIEW OF GOVERNMENT FINANCIAL ASSISTANCE PROGRAMS

OPERATING COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Farm Debt Review Act	To facilitate financial arrangements between farmers and their creditors.	A farmer who is in financial difficulty or who is insolvent, may apply to a Farm Debt Review Board for assistance in negotiating arrangements with creditors that may low operations to ntinue.	Agriculture Canada New Westminster (604) 666-6344 Information is also available at regional offices of B.C. Ministry of Agriculture and Fisheries
Program for Export Market Development (PEMD)	To encourage e marketing acti encourage est exporters to their activit markets outsi Canada. - specific pr bidding - market identification - participation in trade fairs. - incoming foreign buyers - export consortia - sustained export market development.	ntributes towards costs incurred a company in its velopment of new rkets. These ntributions are payable if cremental sales are made to that market area.	Industry, Science and Technology Contact: (604) 666-0434

OPERATING COSTS

Program or Service	Purpose	Form of Assistance	Program Administrator
Small Business Forest Enterprise Program	To provide a source of timber to small logging, timber processing and specialty product manufacturing companies.	A percentage of the total annual allowable cut is reserved for operators registered under the program. Operators may submit competitive bids on timber sales as they become available throughout the Province.	Applications for registration may be made at any Ministry of Forests District Office
Regional Seed Capital Program	See listing under "Capital Costs"		
Resource Economic Development Program (REED)	See listing under "Capital Costs"		
Small Business Venture Capital Program	See listing under "Capital Costs"		
World Information Network for Exports	To provide Canadian Trade commissioners with accurate and current information on the export capabilities, experience, and interests of Canadian companies wishing to export goods or services.	Matching of Canadian export capabilities to sales opportunities throughout the world. Gathering of commercial intelligence in foreign markets.	Industry Science and Technology (604) 666-0434

BUSINESS OPPORTUNITIES

Program or Service	Purpose	Form of Assistance	Program Administrator
B.C. Business Network	To provide an on-line business information systems to provincial, national and international business.	International Business Opportunities Network -information about international trade SupplyNet - information about 40,000 B.C. suppliers. - Calendar of Events - information concerning seminars, trade missions, trade fairs, etc. Small Business Information - Acts and Regulations affecting B.C. businesses and 6,000 useful contacts regarding start-up or expansion of businesses. B.C. Statistics - up-to-date population, business, financial statistics on B.C. Federal Projects - information concerning federal projects.	Ministry of International Business and Immigration Contact: John Falloon (604) 660-4567 Toll Free: 1-800-972-2255

BUSINESS OPPORTUNITIES

Program or Service	Purpose	Form of Assistance	Program Administrator
Public Sector Purchasing Policy	To identify supplier development opportunities within the public sector market, thereby encouraging increased economic activity within the province.	To identify and implement new opportunities to supply goods and services to the B.C. public sector.	Supplier Development & Policy Branch B.C. Purchasing Commission Victoria (604) 389-3300 Vancouver (604) 660-4071 Other B.C. 1-800-972-2255 (Toll Free)
SupplyNet	To create a communications network linking British Columbia's public sector purchasing community and suppliers.	SupplyNet allows suppliers to provide key information on their products to the professional buyers throughout the B.C. public sector. A "business opportunities" module is being developed to display information of interest to the business community: A) Products and services purchased by the government B) Items bought outside the province C) Products and services that are planned to be purchased.	SupplyNet Program Supplier Development and Policy Branch 4000 Seymour Place Victoria, B.C. V8X 4Y3 Victoria (604) 389-3301 Vancouver (604)660-4071/4072 Other B.C. 1-800-972-2255

Program Administrator Addresses

The Science Council of B.C.
c/o The Research Secretariat of B.C.
#100 - 3700 Gilmore Way
Burnaby, B.C.
V5G 4M1

The National Research Council
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